

# MacAddict

## DREAM MACHINES

The 5 Best Mac Setups Money Can Buy

## PHOTOSHOP 7

We review it, rate it, then show you how to use all its new tricks

## APPLE'S OS X INSIDER TIPS

Learn to bend OS X to your will from the guys who created it

## BIG-TIME 3D

On the Disc: Maya PLE  
On p. 71; How to use it

### REVIEWED:

Flash MX • LiveMotion 2.0 • Boris Red 2.1 • Wacom Cintiq  
Nikon Coolpix 2500 • Harry Potter • Duo-96 MP3 Player  
OrangeUSB 2.0 PCI Card • and more...





# When's the last time anyone

"There is no doubt in my mind this is the best (and best-looking), fastest, most capable iMac of all time, as well as the best iMac value ever. This computer is so fine that even Windows users lust for it."

*-Bob Levitus, in The Houston Chronicle*

"Apple has yet again provided a Macintosh polish and elegance at prices the Windows world can't match."

*-David Pogue, The New York Times*

"...the new iMac proves a sequel can be better than the original."

*-Matthew Fordahl, The Associated Press*

"I've been seduced by a computer. Not just any computer, but the new iMac from Apple, the sleekest computer I've ever seen."

*-Mike Wendland, The Detroit Free Press*





# felt this way about a PC?



"When you're actually working on the new iMac, with the screen lowered so it sits between your face and the base, it's a thing of pure beauty. You feel as if you're typing onto a gorgeous palette that's floating in the air."

-Walter Mossberg, *The Wall Street Journal*

"It's the kind of thing you'd expect to see in an *Architectural Digest* photo shoot of Captain Kirk's bed table."

-Steven Levy, *Newsweek*

"Computer users of the world unite: You have nothing to lose but your eyestrain and stiff necks."

-Stephen Wildstrom, *Business Week*

"Yes, I love it, it's just too wonderful . . ."

-David Gelernter, *The New York Times*



The new iMac.

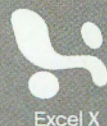


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Excel X



PowerPoint X



Word X



Entourage X

**It's totally reengineered for Mac.  
Why it's in a pickle jar, we have no idea.**

Introducing Microsoft® Entourage™ X, just part of the completely redesigned Office v. X for Mac. With the new Office, you'll get the most native Mac version ever. It's brimming with the fresh Aqua interface. And it's fully compatible with other versions of Office. Inside, a powerful addition, Entourage, tightly integrates e-mail with a radically improved Calendar and Address Book. So now, no matter where you find Office, you'll always find a perfect fit. [microsoft.com/mac](http://microsoft.com/mac)

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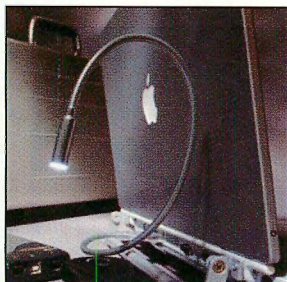


## HIGHLIGHTS

### 22 Dream Machines

Giant plasma screens, full surround sound, pulsating blue knobs. This is the stuff that dreams—and our five money-is-no-object Macintosh setups—are made of. Oh, and we show you some cheaper alternatives as well.

by the MacAddict Staff

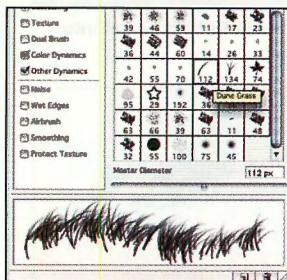


Money can buy happiness.

### 36 Discover Photoshop

Photoshop 7 has arrived, and besides being Mac OS X compatible, it's chock-full of delectable new tools and features. We show you the best new stuff and how to bend it to your will.

by Steve Anzovin

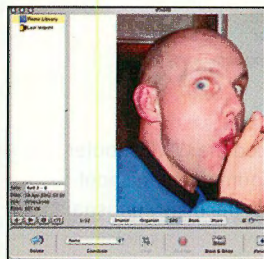
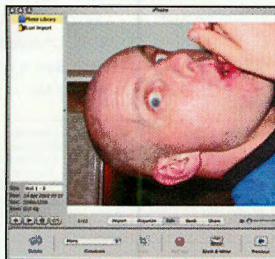


It's finally here—and ready to tweeze.

### 42 Mac OS X Insider Tips

Think you're a Mac OS X know-it-all? Think again. We convinced a few top Apple insiders to share their deepest, darkest Mac OS X and iApp secrets, and discovered that no matter how smart you are, there's always a new trick or three to learn.

by David Schloss



Spock says: These tips are simple—and highly logical.

## HOW TO

### 64 Create Fine Art Digitally

Whether you're artistically gifted or Crayola-phobic, you and your Mac can create good-looking, painterly works of art. We show you how to create digital paintings via Photoshop filters, using software-assisted wizardry and your own deft hand—so hold off on that fourth cup of coffee!

by Rick Price and Cathy Lu

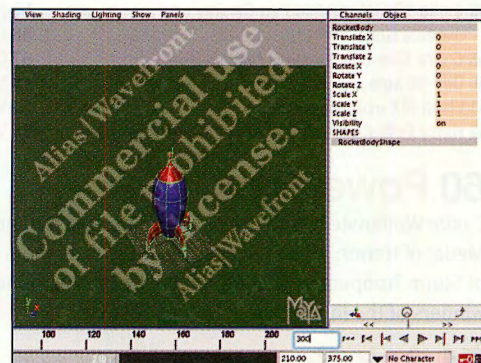


Artists: Your ship has come in.

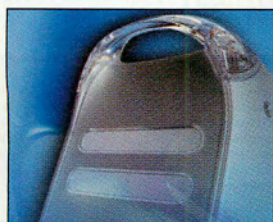
### 71 Animate 3D Objects in Maya PLE

What's better than getting a nearly identical version of a formerly \$7,500 program for free? Easy: learning how to use it! Maya PLE is on this month's Disc (PLE is the full Maya program, except that it watermarks projects), and to get you started, we provide a basic 3D-animation and particle-effects exercise that'll have you screaming, "Houston, I have liftoff!"

by Sean Wagstaff



Luckily the rocket made a soft watermark landing.



Cover photo by Mark Madeo.

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# EVERY MONTH

## 8 Editor's Note

Email spam is neither nutritious nor delicious—it's a pain in the butt.

## 10 The Disc

First it was \$7,500, then it was \$1,999, and now, on this month's Disc, it's free. It's Alias|Wavefront's Maya, the most powerful 3D app in the land—and this version includes all the bells and every whistle. The catch? Just an added watermark. Learn now, pay later. Plus: Paint like a pro with Painter 7, animate your Web site with Flash MX, and share petabytes of files on the Web with Drumbeat.

## 12 Letters

Some dude named Pvito proves he's braver than we are. Plus: iMac keyboards hit the road, a girl gushes about her first, and a PC user speaks out.

## 14 Get Info

Beware: Record companies plan to curb your CD-burning fetish. Plus: Learn why Microsoft won't abandon the Mac and where Fred Flintstone goes to street-race, check out plasma monitors and a camera that doubles as binoculars, and discover how punk legend and Butthole Surfer Paul Leary remixed U2.

## 20 Scrapbook

Find out what's inside an inkjet printer, how it works, what kind you should get, why inks matter, and why Thermal Bubble doesn't only describe your Jacuzzi.

## 46 Reviews

**46 Adobe Photoshop 7** graphics software

**54 Boris Red 2.1** video-effects plug-ins

**48 Cintiq 15x Interactive Pen Display** LCD monitor and graphics tablet

**56 Cobra Slim Drive** external FireWire drive

**50 Duo-96** MP3 player

**51 Flash MX** multimedia software

**52 Harry Potter and the Sorcerer's Stone** kids' game

**53 iShell 2.5.1** application authoring tool

**53 LiveMotion 2.0** multimedia software

**56 MicroGB** external FireWire and USB 2.0 drive

**58 Nikon Coolpix 2500** 2-megapixel camera

**57 OrangeUSB 2.0 Hi-Speed PCI** PCI card

**49 Splat** Adobe Photoshop plug-in

**54 VeloCD** external FireWire CD burner

**55 VueScan 7.5.20** scanner-controlling software

## 60 Powerplay

Castle Wolfenstein isn't the only Nazi ass-blaster, now that Aspyr has announced the WWII shooter Medal of Honor: Allied Assault. Plus: Drool at shots from Preview 3 of Unreal Tournament X, shoot at Storm Troopers in Star Wars Galactic Battlegrounds, and scratch your head at the highly unusual winners of the Independent Games Festival.

## 74 Ask Us

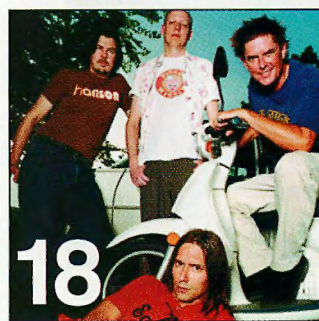
We show you more Mac OS X housekeeping tricks like trashing locked files and disabling startup items with the Shift key. And wouldn't you like to learn a cool iPod trick and a way to relocate your iPhoto Library?

## 96 Shut Down

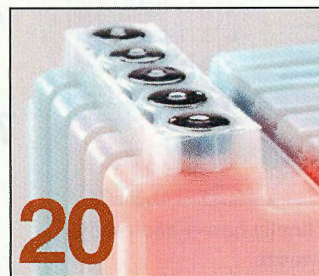
Now that you can engrave whatever you want on the back of your iPod, your choices are limited only by your creativity—or lack thereof.



**8** Wham, bam, no thank you, Spam.



**18** How'd these Buttholes get into the mag?



**20** Bartender, can I get a shot of Cyan over here?

# MacAddict

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**96**

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# 08 EDITOR'S NOTE

A message from the kernel

The one that put me over the edge had "RAPE!" as its subject. When the text of that email message appeared in Entourage's Preview pane, I couldn't help but notice its opening line, "Don't be raped by high interest rates!"

That did it. One miserable category of spam—financial scams—was mimicking an even more despicable category—brutal porn—to trick me into responding. Normally, I find such irony amusing; this time, it simply pissed me off.

It's time to declare all-out war on spam and spammers.

Spam is not just annoying. It's expensive. Let's say your company has 100 employees, and that they earn, oh, about 25 bucks an hour, on average. And let's say each of them spends about 10 minutes a day dealing with spam—a realistic estimate in these spammy times. If so, your company spends well over \$100,000 a year on spam management—and not on raises. Damn.

Spam clogs ISPs as well. One spam-filtering service, Brightmail, reports that in 2001, 10 percent of all email was spam, and that 2002 is twice as bad so far. Guess who's paying for all that bandwidth? You, via your ISP's fees. And it's going to get worse: The Internet analysts at Jupiter Media Metrix warn that spam will triple in the next four years.

So what can you do to throttle that daily dose of Viagra ads, sleazy investment opportunities, and offers to view photos of young maidens involved in activities you'd rather not even think of, thank you very much? Not a lot.

## It's time to declare all-out war on spam and spammers

You should, of course, tweak your email filters or rules to block slime—how often do you receive legitimate email with the words "Cheap Viagra," "Young Girls," or "High Mortgage Rates" in the subject line? Blocking obvious crap will help, if only a little.

Keeping your email address out of the hands of spammers is more effective, but tougher. To do so, never expose your email address on the Web. Anywhere. Newsgroups, online chats, newsletter sign-ups, member profiles, mail-tos on your own Web site—all



Rik is sick and tired of juggling spam.

verboten. If you absolutely must enter your email address somewhere, first create a dummy email account—most ISPs allow you a couple—and use it when on the Web. Give your "real" email address only to trusted friends, family, and business buddies.

Also, whenever you receive unwanted spam from an unrecognized source, *never* click the unsubscribe option. Doing so merely tells the slimeballs who sent it that there's a living, breathing human—you—at that address, making it a lot more valuable to them, and to the scumbos they'll sell it to.

And sell it they will. Address scavengers such as BulkList ([www.bulklist.com](http://www.bulklist.com)) offer "Over 10 million Email Addresses For One Low Price"—and if your email address is on the Web, I'm willing to bet that one of those 10 million is yours. (The chowderheads at BulkList also provide such insightful marketing tips as "make sure all the spelling is correct" before you "gage your response rate.")

It's a bad situation, and it's getting worse. Sure, you can subscribe to sophisticated server-side spam-squelchers such as Brightmail ([www.brightmail.com](http://www.brightmail.com)), but that's just more money spam's taking out of your pocket. Maybe the solution is powerful antispam laws—that's what the folks at the Coalition Against Unsolicited Commercial Email ([www.cauce.org](http://www.cauce.org)) suggest. I'm not a big fan of legislative solutions to every problem, but CAUCE offers some good arguments on its Web site. Check 'em out, then let me know what you think at [rik@macaddict.com](mailto:rik@macaddict.com)—and, no, that address is not exposed on our Web site.—Rik Myslewski

## Staff Rants

### Niko Coucouvanis

The Other Canned Luncheon Meat

**Q** What's the most outrageous spam you ever received?

**A** Um, "Hot Girls and Wild Horses" notwithstanding, that'd be the one offering millions of fresh email addresses for me to spam—including my own, no doubt.

**Q** If you had your way, how would flagrant spammers be punished?

**A** It'd have to fit the crime: English lessons for some, weird sex stuff for others, and for all of them, a life wasted pursuing get-rich-quick schemes. I like to think that on that last one, I'm already getting my way.



### Cathy Lu

Resident Stickler and Bad-TV Expert

**Q** What's the most outrageous spam you ever received?

**A** Either the one titled "Leaen to Trade the Yen!" or "This pogram let you investigate Anyone-Anytime!" These people had better invest in a good spelling and grammar checker or they're not getting my business!

**Q** If you had your way, how would flagrant spammers be punished?

**A** They should get a taste of their own poison. They should be forced to eat a can of spam—including the jelly and the juice—for every spam they send.



### Chris Imlay

Evil Redesigner

**Q** What's the most outrageous spam you ever received?

**A** This was spam I could really sink my teeth into: "dear LORD: NSYNC is in the new Star Wars, i (expletive) you not." It caught my attention more than anything else this year. So sad...

**Q** If you had your way, how would flagrant spammers be punished?

**A** They would be forced to read a copy of every pamphlet and brochure ever handed to anyone at an airport, and then memorize the lyrics to the entire song catalog of "hair metal" bands from the 1980s.





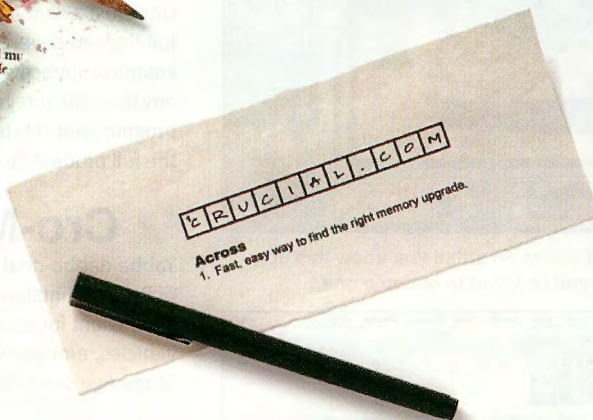


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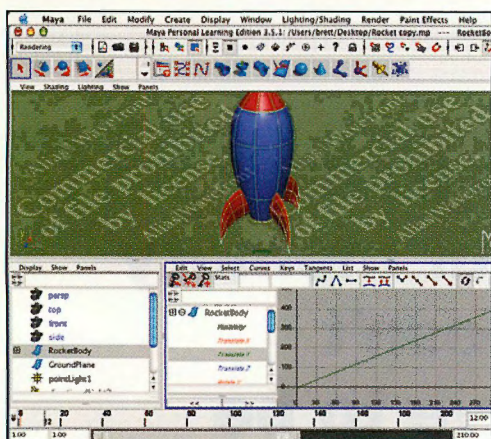
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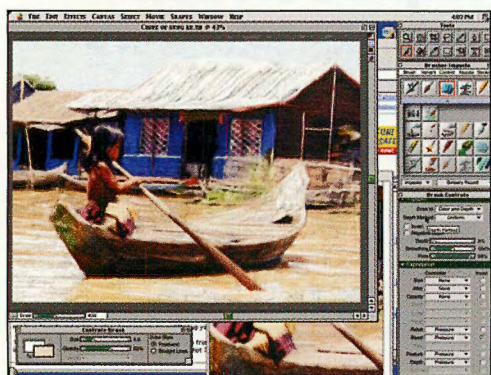


# 10 THE DISC

How much cool software can we cram onto one Disc? We're glad you asked



**MAYA** A free, full-featured version of a \$1,999 app? Yup, but with watermarked output.



**PAINTER 7** If you're an artist, you know this app. If you're not, you're about to become one.



**FLASH MX** It's brand new, it's freakin' awesome (see p51), and for the next 30 days, it's yours.



**CRO-MAG RALLY** Ever wonder how Fred Flintstone would drive? This racing game'll show you.

## Maya PLE

If you've ever thought about ditching your 9-to-5 job to become a professional 3D artist, but weren't ready to slam down \$1,999 for Alias|Wavefront's Maya, this is your lucky month. Maya PLE (Personal Learning Edition) has all the power of professional Maya—nothing is disabled or limited—but your projects bear a watermark to prohibit commercial distribution of your work. Learn now, buy later.

## Painter 7 Trial

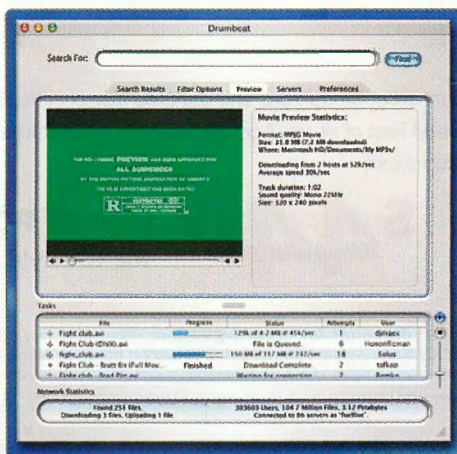
This ultracool app allows you to create works of art with digital paint that replicates the organic look of oil, watercolor, gooey ink, chalk, acrylic, crayon, pencil, and other media. Of course, artistic talent will help you delve much deeper into the program. (This ain't no paint-by-numbers or Mac-assisted painting deal.) Choose from a wide variety of brush styles and textured surfaces, and go crazy.

## Flash MX Trial

Once just a simple vector-art animation program, Flash has evolved into a full-fledged development environment with a powerful scripting language for creating interactive apps and content for the Web, kiosks, handhelds—almost any location. Integrate music, video, motion graphics, and text within the program and create high-impact, front-end apps. This trial version gives you the full product for 30 days.

## Cro-Mag Rally

Yabba-dabba-doo! This wildly wacky and entertaining game puts you in the role of Brog, a Flintstone-esque caveman with a chronic case of 5 o'clock shadow and a penchant for speed. Park Brog's butt in a number of primitively fashionable vehicles, arm yourself from a huge arsenal of weaponry, and race against other Stone Age simpletons. Brog says, "Speed gooooooool!"



Trade audio, video, graphics files, and more over the Web with Drumbeat.

If you don't receive the Disc with your copy of MacAddict, you might want to consider upgrading! Each monthly Disc contains cool demos, useful shareware and freeware, and the inimitable MacAddict staff video. To get 12 issues of MacAddict that include this value-packed Disc with your subscription (prorated if necessary) for just \$10 more, call 888-771-6222—the operator will take care of everything.



**But wait! There's more!** Build cross-platform multimedia apps in a matter of hours with iShell. Create your own Paradise in fewer than six days with Vue d'Esprit. Replace your current scanner driver with VueScan. And the list goes on!

With this month's Disc crammed full of graphic booty, we simply ran out of room for our monthly staff video. But we'll make it up to you twice: This month, with a 15-day full-featured demo of Drumbeat, a top app for sharing files on the Web. Next month, with an exclusive staff video you won't want to miss. (Hint: It's from a galaxy far, far away.)



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# 12 LETTERS

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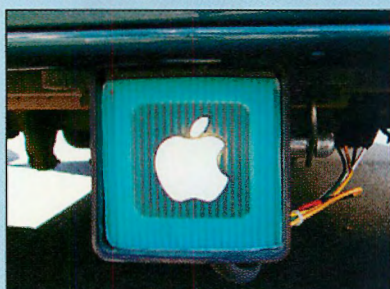
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## Recently Sighted

I made this lighted trailer-hitch cover with the backside of a USB iMac keyboard. It even matches my Bondi Blue van.

—Jeff Lafrenz



## THE REWARDS OF INSANITY

I just wanted to thank you guys for the new iBook you gave me. I read your article "How to Upgrade Your iBook" (Mar/02, p62), and I was insane enough to overclock my iBook. To be honest, I had never really used a soldering iron before. After I put in about three hours of blood, sweat, and tears, I didn't think my iBook would even start up. Well, it did, and it was a whole 100MHz faster. Yippie skippie! Kiss my warranty goodbye!—Pvito  
*Congratulations, Pvito, but why do we get the feeling you'd be getting litigious on our collective butt if things hadn't worked out so smoothly? (Yes, we're bitter that you did what we don't have the cojones to try. Let's see you try that on your iPod, tough guy.)—Ed.*

## YOU'LL ALWAYS REMEMBER YOUR FIRST

I sold my Hewlett-Packard on eBay two weeks ago to buy my first Mac, an iMac with a SuperDrive. Now I am truly a Mac addict. I'm currently using iMovie to make a music video for my boyfriend's band. I can't get enough of the cute icons bouncing in my Mac OS X Dock, and I can't go to the mall without stopping at

the Apple store, even if it's just to play with some of the other machines. As soon as I put an Apple sticker on the back of my car, it'll be official: I will never go back.—Julie Tolek  
*Good choice on the first Mac purchase, but keep an eye on your addiction, which is growing at a rapid rate even by our standards. But what the heck—at least it's legal.—Ed.*

## IXNAY ON THE XBOX

What's all this about the Xbox in the May 2002 issue (p27 and p65)? You seem to regard it as the standard that Mac gaming has to match. Don't you know there's another console on the market called the Nintendo GameCube? It runs a 485MHz PowerPC processor, offers cool games like Star Wars Rogue Leader, and will soon see games like Mario and Zelda. Did I mention that it costs \$100 less than the Xbox? Geez, I thought you guys would know a superior product when you see one.—Anthony  
*At least Xbox's Halo, which we like to think started life as a Mac game, has a 0.5 percent chance of making it to the Mac—unlike Mario, which has a 0 percent chance.—Ed.*

## THE CASE OF THE MISSING PREAMP

"Audio Ins and Outs" was a great article on hooking up audio to your Mac (*Scrapbook*, May/02, p20), but where in the world do I find RCA's AH500 phono preamp?—Gail Lengel  
*RCA sells them through selected Radio Shack, Circuit City, and Best Buy resellers. If you can't find this particular model, any comparable phono preamp will suffice.—Ed.*

## FINDING YOUR INNER MACADDICT

The article "Unleash Your Mac's Hidden Powers" (Apr/02, p20), was pure adrenaline for the Mac addict in me. I tried four of the Mac OS X hacks and the results amazed me. I first learned to "Run the Finder as Root" (p22) without working up a sweat. I then figured out how to "Enable Window Buffer Compression," which gave my 350MHz Sawtooth Power Mac G4 the confidence it used to have in OS 9. Next, I read "Customize Your Scroll Bars" (p24) and put arrows at both ends of my scroll bars. Last but certainly not least, "Make Your Broadband Soar" (p25) did exactly that. All

this without any Unix experience required. Cool.—Michael Stockwell  
*Power is an addictive thing, isn't it?—Ed.*

## OFFICE ALTERNATIVES

I wish you had more articles like "How to Design Pages with AppleWorks" (May/02, p66). Not everyone can afford, or is willing to use, Microsoft Office. Maybe if you had more tutorials on AppleWorks, more people would see what they can do with it and would choose it instead of Microsoft Office.—Kathy Martin  
*We try to use a full range of applications in our how-tos to appeal to all our readers, including those who think the Land of the Free refers to a country that excludes Redmond, Washington.—Ed.*

## D'OH!

I was reading the debate in "Mac OS X Versus Windows XP" (Apr/02, p40), and I would like to mention something. I am one of those Windows XP users, but I noticed that Microsoft's software (especially MSN Messenger) looks better in Mac OS X than in Windows XP. Even the Microsoft Office application logos look 110 times better in X. I'm thinking this makes Microsoft look kind of dumb.—Nicholas Korn  
*Read it and weep, Bill.—Ed.*

## LMNO PROBLEM

Thanks for the article "MacAddict's Encyclopedia of Networking" (May/02, p32). After reading this, I was actually able to overcome my fears and network my three Macs in about 15 minutes.—Clark Kramer  
*Ah, information—the universal antidote to technophobia.—Ed.*

## You Know You're a MacAddict When...

...you vote for the new Aqua M&M color.

—Sergio Castaneda

...you scan in an entire MacAddict issue to show your girlfriend how cool Text-to-Speech is.—Tom

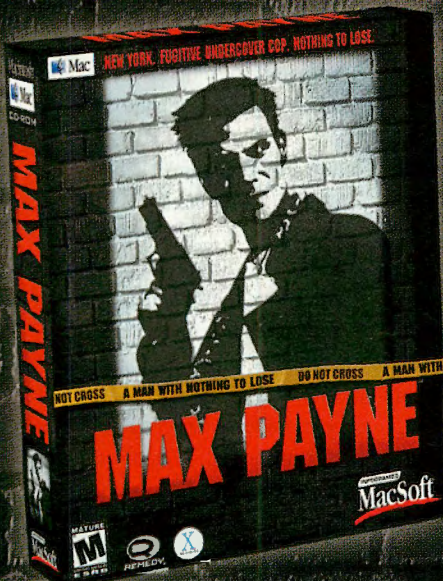
...you regularly check the Managua, Nicaragua, airport bookstore just to buy a four-month-old MacAddict.—Gerd Schnepel  
...all the hearts you draw begin to look like Apple logos.—Ross Paffett



**NEW YORK.  
FUGITIVE UNDERCOVER COP.  
NOTHING TO LOSE.**

**CROSS A MAN WITH NOTHING TO LOSE DO NOT CROSS A MAN WITH**

# MAX PAYNE™



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PHOTOGRAPH BY MARK MADEO



## RIP 'EM WHILE YOU CAN

How Record Companies Will Keep You from Copying Your Own CDs

**T**he next time you buy an audio CD and try to rip the tracks to iTunes, a series of pops and clicks may corrupt the digital copy of your songs, or worse: Your Mac's CD-RW drive may not even be able to read the disc. The reason is that top record labels are experimenting with copy-protected CDs to prevent you from distributing copyrighted music. Unfortunately, this strategy interferes with your right to listen to digital copies of the music you buy.

Technology glitches that prevent some CD players from playing encrypted CDs have so far blocked a large-scale rollout of copy-protected CDs. The three leading providers of encryption technology (Sunnyvale, California-based Macrovision; Israel-based Midbar Technologies; and Phoenix-based SunnComm) say 99.5 percent of CD players are compatible with their technologies, so major labels are starting to implement them. BMG, for example, announced that it will copy-protect all CDs

distributed for promotional use, and Sony, Vivendi Universal, Warner Music, and EMI have already released copy-protected CDs in Europe. Here's a brief look at how the three main encryption technologies work.

### SAFEAUDIO

Macrovision's SafeAudio exploits a CD's error-correction code, which helps CD players work around minor data loss resulting from faulty manufacturing or scratches. The code tells the CD player to look at the music in front of and behind the data loss and create a replacement sound. When your Mac's CD player reads an audio track off the CD itself, the error-correction code works as it should. When your Mac rips CD tracks to your hard drive, however, the copied music becomes a data file (not an audio file), and the error

correction code doesn't work. SafeAudio deliberately introduces sample errors onto a CD for the code to address. These errors sound like a series of pops and clicks when your Mac tries to play the ripped music. Macrovision says testing revealed no complaints of distortion in CD play.

### CACTUS DATA SHIELD

MidBar Technologies' Cactus Data Shield inserts additional control data, containing CD and track-length information, within the audio data on a CD. Both computer and home-stereo CD players ignore the extra information when reading audio directly from the CD; however, when your Mac reads ripped CD tracks as a digital file, control data renders the digital copy useless. According to Midbar Technologies, extensive testing by consumers shows that the extraneous code is inaudible.

### Know and Protect Your Rights

"Encrypted CDs are meant to prevent piracy," says Graham Spencer, member of [digitalconsumer.org](http://digitalconsumer.org), "but really it inconveniences the consumer and leaves all control to the content companies." [Digitalconsumer.org](http://Digitalconsumer.org) wants to defeat the Consumer Broadband and Digital Television Promotion Act (CBDTPA), commonly known as the Hollings copy-protection bill, which requires all future electronic devices to include security measures meant to prevent piracy. Visit [www.digitalconsumer.org](http://www.digitalconsumer.org) for ways to voice your opinion to Congress.



# DANCING TO A DIFFERENT DRUMBEAT

The Latest Post-Napster File-Sharing App

**D**rumbeat (Groundlevel Software, <http://drumbeat.info>, \$29.95) is the latest way to trade music, video, and other files with up to 650,000 users over the Internet.

Drumbeat currently taps into OpenNap, a worldwide, open-source, Napster-style network, allowing users to share information over 100 to 200 servers. The application will soon tap into the popular AudioGalaxy network and true peer-to-peer networks, like Gnutella, that use no central servers.

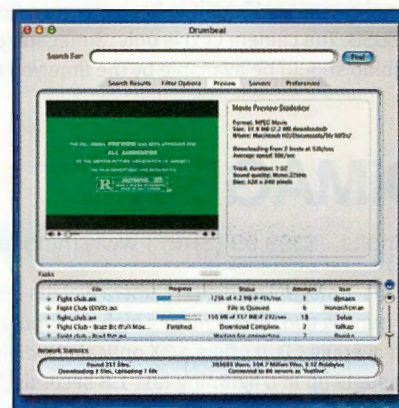
The question arises of why Mac users need yet another file-sharing app, particularly when apps like LimeWire (a Gnutella client) are currently well entrenched. The answer, Groundlevel Software's President Jeffrey Ellis says, is that Drumbeat aims to make searches easier and more productive. When you search for a file, Drumbeat's Intellisearch technology searches for different

combinations and variants of your search words to bring back all possible relevant results. Then it weeds out partial downloads by eliminating files under a certain user-defined size. Like LimeWire, Drumbeat also comes with Adult Filtering and a Mac-like interface. It should be Mac OS X native and should offer QuickTime and JPEG preview screens by the time you read this article.

A faster, easier way to trade music and movies over the Internet is bound to raise some eyebrows, but Ellis is not worried. Since Groundlevel Software doesn't maintain central servers as Napster did, Ellis says Drumbeat has no way of monitoring (and therefore no liability for) what users are downloading. He likens Drumbeat's position in the peer-to-peer software industry to Panasonic's

role in the VCR industry. "It's not the job of Panasonic to censor people taping stuff off the air," Ellis says. "We hope that people who are sharing files are sharing new music that's not available on CD."

Yeah, right, buddy. Still, Drumbeat has the potential to trade more than just music quickly and efficiently, so we're wishing it luck.—NR



Drumbeat's new QuickTime preview screen lets you watch while you download.

## MEDIA CLOQ

SunnComm's Media Cloq protection works by making an audio CD's table of contents and directory information invisible to the user. While the CD will play on your Mac, you cannot locate the necessary track information on your desktop to transfer a file to your hard drive. Only the Media Cloq encryption system does not introduce additional code to the audio file, leaving the music untouched. Fahrenheit Entertainment used this technology on the Charley Pride album *A Tribute to Jim Reeves*.

Currently a battle is brewing between advocates of copyright laws and consumer rights advocates (see "Know and Protect Your Rights," p14). So burn your own CDs while you still can. If the record companies get their way, you won't have this freedom for much longer.

—Keelin Devincenzi

# BU! MICROSOFT SPOOKS MAC USERS

Microsoft and Apple End Contract but Continue Relationship

**M**icrosoft and Apple will let their five-year technology contract lapse this August, causing some Mac users to celebrate and others to enter a frenzied panic about Microsoft ending its support for the Mac platform.

The rumors about weakening Microsoft support for the Mac are not true, according to Kevin Browne, general manager of the Microsoft Macintosh Business Unit (affectionately known as MacBU). "My personal belief is that the only way we're going away," says Browne, "is if Apple is going away, too."

To prove Microsoft's commitment to Apple's future, Browne announced that all future releases of Microsoft Macintosh products, which focus on Office and Internet Explorer, would be Mac OS X only.

The larger question is how the Mac will fit into Microsoft's overarching .NET strategy, which uses XML-based Web services to integrate users, systems, and devices via the Internet. Browne proposed a long-range plan in which the MacBU would work on connecting Office and Internet Explorer to .NET Web services (such as .NET Calendars), but said that Microsoft would not port .NET developer tools to the Mac.

The MacBU's primary focus is development for Mac consumers and small businesses, so Microsoft's ambivalence toward the Mac in its enterprise-targeted .NET strategy is hardly surprising and shouldn't cause anyone to panic—at least, not yet.—Narasu Rebbapragada



## DROOLWORTHY

Sexy Stuff We Can't Wait to Get Our Mitts On

With Pentax's Digibino DB100, you won't have to juggle multiple gadgets.



## Digibino DB100

Pentax \$399 (street) [www.pentaxusa.com](http://www.pentaxusa.com)

Birders and sports fans will no longer miss precious shots while switching equipment. Pentax's Digibino DB100 combination binoculars and digital camera comes with 7X optical zoom, 16MB built-in flash memory, fast shutter speeds for quick-moving action, and USB. The camera CCD is only .8-megapixel, so don't expect to print large pictures. The Digibino should be available by the time you read this.—NR

## DiIMAGE X

Minolta \$399.99 (SRP) [www.minoltausa.com](http://www.minoltausa.com)

This 2-megapixel digital camera weighs less than 5 ounces and, at 2.8 inches high, is about half as tall as your average CD. It offers a 3X optical (2X digital) zoom and starts up in a lightning-fast 1.8 seconds. The DiIMAGE X records up to 35 seconds of digital video and up to 90 seconds of audio, and comes with a 8MB SD (Secure Digital) card.—NR



When did digital cameras become so dainty?

## SHAREWARE PICK OF THE MONTH

### CRO-MAG RALLY 2.0.4

PRICE: \$20

URL: [www.pangeasoft.net](http://www.pangeasoft.net)

Now that Pangea Software has sold nearly all of its commercial boxed copies of Cro-Mag Rally, the company has decided to turn this racing game, set in the Stone Age, into a download-only shareware game. Race a prehistoric hot rod against the computer in single-player mode, against your buddy in two-player mode, or against up to six players in multiplayer mode, which includes Capture the Flag and Survival styles of gameplay.

Pangea Software keeps violence out of its games, so Cro-Mag Rally is suitable for kids and adults.—Andrew Tokuda



Cro-Mag Rally is good old-fashioned fun. We mean really old-fashioned—get it?

## NEWSNOOK

### Apple Adds Fuel to FireWire

While the PC world continues to test the USB 2.0 waters, Apple reaffirmed its commitment to FireWire in April by acquiring Zayante, a FireWire technology company once known as FireFly and founded by former Apple FireWire developers. Zayante created an architecture that allows manufacturers of hardware and consumer electronics to incorporate FireWire into their 1394b products.

### Apple Slides Down the Fortune 500

Apple ranked 325 on *Fortune* magazine's 2002 list of the 500 largest companies. While our favorite computing company more than made the cut, it failed to match its 2001 ranking of 236. On a brighter note, Apple made *Fortune*'s list of most admired companies, getting a perfect score in the innovation category.

### Panasonic and Apple Fire It Up

Apple and Panasonic announced at this year's National Association of Broadcasters Conference that Panasonic would add FireWire to its DVCPro50 and DVCProHD tape decks and that Apple would support Panasonic's 24-fps digital-video camera in a future release of Final Cut Pro. The news is a boon for video professionals, who can now import full ITU-601 DV of 4:2:2 quality at 50 Mbps and High Definition video at 100 Mbps externally over FireWire.

### A SuperDrive for the Masses

Formac Electronics ([www.formac.com](http://www.formac.com)) freed the SuperDrive from its highfaluting place in top-of-the-line Macs and unveiled the Devideon SuperDrive, an external FireWire DVD-R/RW and CD-RW plus DVD-authoring software, which converts iMovies and QuickTime files to MPEG. Formac says the Devideon works with all FireWire-equipped Macs in Mac OS 9 and Mac OS X and is available now for \$549.



# PLASMA POWER!

Plasma Displays Take Your Mac to the Big Screen

Plasma displays can transform your Mac into a big-screen entertainment center. They work by electrically charging neon gas that's trapped inside three subpixels per pixel (one each of red, green, and blue). When the electric charge switches off, the gas discharges its electrical energy, causing the phosphors in each subpixel to glow. This scheme allows for flatter hardware, large screen sizes, a wide viewing angle, and color uniformity.

One tip in shopping for a plasma display: Keep in mind what you'll be viewing and from what vantage point. While

most plasma displays handle computer graphics and DVD video beautifully, not all are optimal for viewing HDTV or NTSC television signals without the aid (and expense) of an additional card. Plus, if you're going to view from a distance, you might want a display that accepts coaxial BNC cables.

All of this science costs a pretty penny. The displays shown here cost upward of \$5,000—way upward, in some cases—but then, the wave of the future has never come cheap. Here's what is out there right now in a standard 42-inch size.—NR

## PlasmaSync 42MP4

NEC, [www.necvisualsystems.com](http://www.necvisualsystems.com), \$9,995  
This 42-inch display lets you zoom in on portions of the screen. It comes with stereo audio and has 1,024-by-768-pixel native resolution and a 16:9 aspect ratio for DVD viewing.



## PureVision PDP-433CMX

Pioneer, [www.pioneer.com](http://www.pioneer.com), \$11,500  
This 43-inch display has a 1,024-by-768-pixel native resolution and a 16:9 aspect ratio for DVD viewing. Pioneer's displays come with an expansion slot for DVI, and the company is working on future FireWire and TCP/IP cards to bring in video signals.



## Plasmavision SlimScreen PDS-4233

Fujitsu, [www.fujitsu.com](http://www.fujitsu.com), \$5,999  
This 42-inch display has a 16:9 aspect ratio, an 852-by-480-pixel native resolution, and a built-in stereo amplifier.



## CMP4121HDU

Hitachi, [www.hitachi.com](http://www.hitachi.com), \$7,995  
This 42-inch display has a native 1,024-by-1,024-pixel resolution, a 160-degree viewing angle, and a native 16:9 aspect ratio for movie viewing.



## NEWSTUFF

### Cinema Tools

Apple, [www.apple.com](http://www.apple.com), \$999  
Available: Now

Apple targets filmmakers with this companion to Final Cut Pro 3. Cinema Tools, which improves Final Cut Pro's 24-fps editing capabilities, supports film cut lists and 24-frame edit decision lists for high-definition video. Cinema Tools works in Mac OS X only.

### DVD Studio 1.5

Apple, [www.apple.com](http://www.apple.com), \$999  
Available: Now

Apple upgrades its professional DVD-authoring application with native Mac OS X support and better Final Cut Pro integration.

### FrameMaker

Adobe, [www.adobe.com](http://www.adobe.com), \$799  
Available: Second quarter 2002

In the new version of this technical publishing tool, Adobe improves XML support, enhances the program's authoring tools, and combines FrameMaker and FrameMaker+ SGML into one product, which is not Mac OS X native. Adobe also introduces the Adobe FrameMaker server (\$7,999) for network publishing.

### Dreamweaver MX

Macromedia, [www.macromedia.com](http://www.macromedia.com), \$399  
Available: Now

Macromedia combines the next revs of its Dreamweaver and UltraDev Web-authoring tools in Dreamweaver MX, now ready for Mac OS X. In addition to offering a new interface, collapsible panels, prebuilt layouts and code, expanded support for Cascading Style Sheets, and a more robust coding environment, Dreamweaver takes advantage of Macromedia's ColdFusion server to create complex Web sites and Internet applications.

### FireWorks MX

Macromedia, [www.macromedia.com](http://www.macromedia.com), \$299  
Available: Now

Macromedia adds a new property inspector, support for data-driven graphics, better control over JavaScript Web navigation, and extensibility to this Web-graphics application, which now supports Mac OS X.

### Iomega HDD Portable Drives

Iomega, [www.iomega.com](http://www.iomega.com), \$229 and up  
Available: Now

Iomega adds its detachable interface design to a line of slim 20GB and 30GB drives. The drives plug into both USB 2.0 and FireWire interfaces and come with Iomega's QuikSync software (ready for Mac OS X). Iomega says you can drop these devices from a height of 50 inches without damaging them.



## INTHESTUDIO

# PAUL LEARY

Butthole Surfer Remixes U2

Paul Leary attained punk nirvana a long time ago. As cofounder and guitarist of the legendary Butthole Surfers, he has been amazing audiences for 20 years with mind-blowing stage antics featuring naked women and flaming drum kits. The tech-savvy madman has also produced platinum-selling records and songs for rock staples like Sublime, Poe, Weezer, Nelly Furtado, and pop megastars U2.

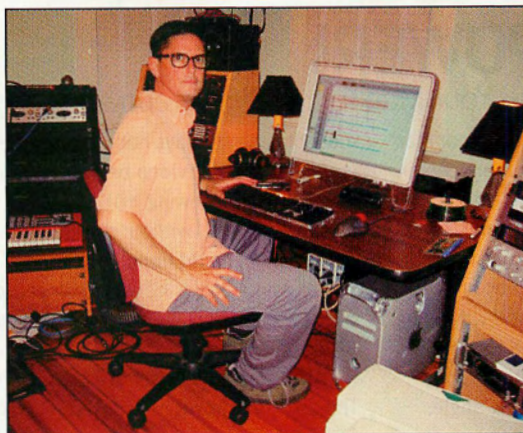
From his home in Austin, Texas, Leary talked to us about remixing the Grammy-winning U2 song "Elevation" for the *Tomb Raider* movie soundtrack. U2's record label wanted to update the bouncy pop ditty to appeal to a modern-rock radio audience, so they hired Leary and former Nine Inch Nails drummer Chris Vrenna to pump it up. Using Digidesign's Pro Tools (www.digidesign.com), Vrenna added new guitar and bass parts to give the song a hard-rockin' feel. Vrenna then handed the Pro Tools sessions—burned on six CDs—to Leary, who holed up with his Mac at home to add some polish and flair of his own.



Looks can be deceiving in Pro Tools. This bland-looking set of bars represents the hard-rockin' remix of U2's "Elevation."

### LEARY'S MAIN MAC

Leary worked on the "Elevation" cut using a PowerPC 9600, upgraded to a 350MHz G3—the brains of his Pro Tools 24 system. This Mac's six PCI slots handled all the editing Leary threw at it. The 44-year-old punk legend uses the 9600's 10GB of internal disk space to run Pro Tools but records his sessions and audio onto external 10,000-rpm Seagate Cheetah drives. "I've got drives all around the house," he says.



When Paul Leary's not playing mad guitar with the Butthole Surfers (right), he's playing producer for the stars at his Texas home studio (left).



BUTTHOLE SURFERS PHOTOGRAPH COURTESY OF HOLLYWOOD RECORDS; PAUL LEARY PHOTOGRAPH BY L. PAUL LEARY

### ALL THINGS MUST PASS

Leary recently retired his PowerPC 9600 for a new 933MHz Power Mac G4 with a beefed-up 1.5GB of RAM and five internal hard drives totaling around 360GB. What's he doing with all that juice? He's partitioned his 60GB startup drive so that one partition runs Mac OS 9 and Pro Tools while the other is dedicated to Mac OS X. He uses two additional 7,500-rpm 80GB drives and two 10,000-rpm 70GB Seagate Cheetah drives for recording.

### POP GOES THE BASS


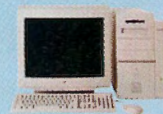






In Pro Tools, Leary polished up Vrenna's sessions and beefed up the drums by blending the recorded sounds with kick-drum and snare samples from his own sound-file stash. He also cleaned up parts of the original recording. For instance, the microphones for the drums caused irritating time lags. Leary fixed the glitch by pulling forward the audio from the snare drum's bottom mic so it aligned with the audio from the snare drum's top mic. The original bass track was "popping like fireworks," Leary says, referring to the hissing and crackling that results from recording, so he looked for sharp peaks in the sound waves and essentially redrew them in Pro Tools' Edit window with the pencil tool.

### U LIKED IT 2

When he finished working the U2 remix, he grabbed his hard drives and brought them to Blue World Music, a studio in Dripping Springs, Texas, which has a Pro Tools rig and an SSL 4000 G+ special-edition analog board. Leary then separated the tracks and transferred the mix to 1/2-inch tape. U2 liked the results. The band jetted to Enterprise Recording in Burbank, California, so they could play the new parts themselves.—Narasu Rebbapragada

## Leary's Multiple Macs

"I'm a sucker for computers," Leary says, and explains why he owns a Blue Dalmatian iMac, among many other models.

LEARY'S MACS	WHAT THEY MEAN TO HIM
 Centris 650	It almost put him off Macs for life.
 PowerPC 9600	It made up for the Centris 650. "It makes me sad that I have to move beyond it," Leary says.
 G3 PowerBook	It bit the dust, and he replaced it with a Tangerine iBook.
 Tangerine iBook	It was the latest thing. Now it's Leary's fax machine.
 New iBook	A present to himself. It runs his Reason audio software.
 New iBook #2	A present to his girlfriend. Isn't that sweet?
 Blue Dalmatian iMac	Goes with the decor in his house. Apple's stoked about that.
 Power Mac G4	His new, new thing. "It f#@*ing rocks," Leary says.



# personals

like ships  
passing in  
the night

**SUPERMARTIN** Not older  
gal with Spin  
at WFM. Me  
pony tail. b  
hot lunch?  
#6922

**COCK** I did not  
get made my day,  
you beautiful. I would  
in. Did I read

**PHONE-PLAYING**  
withville recently  
Georgia. #6854

**WE MET IN MADISON,**  
summer. Would like to talk  
again! #6967

**FROM WCW.** Exchanged  
at cage match. It was pure  
magic. Would love to get you in a  
deeper hold. #5627.

**BEAUTIFUL AND SEVENTEEN:**  
Met you at the Metro. You were on a  
date with someone else. Next time it  
will be me. #6973

**LEVITATING BUDDHA SWORD-  
PLAY** welding lady. I'm interested,  
but your brave new world expired  
yesterday. #778

**VEGETARIAN BOWLER.** You  
bought me a warm beer and stole  
my heart. Used same kind of ball  
and spoke of hatred of rented  
shoes. Would love to chat over  
hummus. #5684.

**LAWN CARE?** My husband got lazy  
and hired you to mow our lawn.  
Instead you landscaped my erotic  
fantasies in ways I have never imag-  
ined. Could not pronounce your  
name but looked very sensual. I had  
blue shoes on. #3696.

**TWINS WHO SAW TWINS.** Us: two  
handsome guys in suspenders walk-  
ing Maltese. You: two foxy ladies  
fighting over last piece of gum. What  
do you say the four of us make two  
good looking couples? Twin love.  
Call me. Call me. #4747.

**DUGOUT FIRECRACKER.** You  
were cleaning up a beer that you  
spilled on your white t-shirt and  
threw a whiskey bottle at the  
umpire. Must meet you and make  
children. #5551.

**LORIN, YOU'RE GORGEOUS,**  
funny and brilliant. I don't deserve  
you but a girl can dream. #6885

**SY FROM DOWN SOUTH.** You sat  
with us at Smitty's 11/24, missed  
you at The Boot. Wanna meet after  
work sometime? Call and gimme  
your number. Jenny #6927

**CLASSY LATINA** With substance,  
50 plus, non smoker, very pretty, soft  
pink lips, nice little butt, love to  
be kissed and loved. #6927

**RON FROM SANTA FE.** You  
danced with me at the Rattle &  
Cattle Club. Thanks! I was shy. Can  
I see you again? Will come down to  
look for you Friday night. #6841

**GORGEOUS, WITTY, BORN TO  
tease:** love theater, dance, golf,  
warm conversation. If you're tall,  
35-55, non-smoker, financially  
secure, enjoys pampering a woman,  
traveling, long walks and stars,  
please call. #6821

**ME: LONELY SWEDISH LINGERIE MODEL**  
and gourmet cook. You: slightly overweight  
and without ambition. Must be into computers,  
role-playing games and air hockey. #5988

**49, PLAIN BUT WITH GOOD BITS.**  
overweight but curvy, great mind,  
wicked sense of humor, and a weird  
view of life looking for like minded  
person. Age not important. #6994

**TREE HUGGER, MID 50'S,** light  
smoker, tall. Like easy living, tropics  
and I'm friendly. Seeking consider-  
ate, semi-fit companion with a clue.  
Must love dogs and reggae. #6963

**ARE YOU HONEST,** handsome,  
successful, financially secure, intelli-  
gent, world traveled, cultured, cre-  
ative, fit, playful, adventurous, pas-  
sionate, humorous, caring, loving,  
and between 46 and 58? Respond  
to European, blonde temple coun-  
terpart. #6952

**ARE YOU STIMULATED BY** beauty,  
intelligence, humor? Attractive SWF  
wants good looking SWM or SHM  
for romantic adventures, possible  
long term. Essentials: honesty, pas-  
sion, kindness, sensuality, integrity,  
open mind. #6741

**ATTRACTIVE TALL (5'10"),** slender  
DPWF, 46, emotionally and physi-  
cally fit, youthful appearance and  
cutback, intelligent, loving, desires  
long term relationship. #6853

**YOU WON'T BELIEVE YOUR EYES**  
when you see this very cute, petite,  
DWF, 46, long brown hair/hazel  
eyes, 5' 110, outgoing personality  
seeks DWN, 46-55, non smoker, fit,  
college educated. Call me, let's see  
if the chemistry is right! #6951

**SWF, 26, STRAWBERRY CURLS**  
and tattoos. Creating a complex,  
enriching, educated, passion-  
ate relationship. Will respond  
to anyone who is serious.

**NOT SO DESPERATELY** seeking  
one smart, strange, sexy boy to  
court and spark. Me: 23, open to  
possibilities and ravenous for new  
life experiences. #6933

**SWINGING SANTA.** Lonely man  
who only works 6 weeks a year  
seeking woman with full time  
employment with benefits looking to  
grow old with man who shakes like  
a bowl full of jelly. #1258

**WM, 95, RECENTLY WIDOWED,**  
seeking 18-20 hottie for "fun". Call  
even. I'm not getting any younger.  
I'll put you in my will. #6757

**BALD ROMEO.** You serenaded the  
old people at the old people home  
last weekend. You were a terrible  
singer and quite unattractive, but  
your heart is obviously pure gold.  
My sister would be perfect for you.  
#7887.

**MONKEY TRAINER.** Seeking  
woman to train my monkey.  
Seriously, his name is Murphy and  
he is a 3 year old chimpanzee. He  
likes pop tarts and nice people.  
Plus, you and I will have sex.  
#7874.

**SINGLE MAN.** Single man seeking  
single woman for relationship. I  
enjoy dating and talking on the  
phone to women that I am dating.  
Would love a chance to date some-  
one. #1254

**OUTIE PIE SMARTY PANTS** and  
shades adv. lsd for "discovering"  
new things, personal growth, be-  
lieving in the power of the mind.

**SIDESH**  
sidesh  
well p  
ron  
ar

**T**  
he  
ing  
fight  
do y  
good  
Call me

**MANY WON**  
my life - but no v  
wonderful woman, n  
smart, professional, att  
(non smoker). Love of natur  
irreverent humor. #6772


**RECENTLY PAROLED,** looking for  
a lady who will keep me on the  
straight and narrow. Must be into  
drugs and shopping. #6357

**NOPELESS ROMANTIC,** seek  
best friend and potential lover  
who is smart, sexy, and has a  
great sense of humor. #6927

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## Interrogating Inkjets

by Narasu Rebbapragada

With countless brands and models of inkjet printers to choose from, deciding which one to buy can be an arduous task. We talked to the experts at Canon, Epson, and Lexmark, all of which manufacture consumer inkjets, to get answers to common questions that arise when shopping for a printer. Knowing what you need is half the trick to finding the printer right for you.



PHOTOGRAPHY BY MARK MADEO

Epson's wide-format Stylus Photo 2200 prints with seven ink colors.

### What resolution do I need?

Resolution is the number of dots per inch (dpi) a printer puts on the page. While printers like Lexmark's Z65 offer resolutions up to 4800 dpi, photo printers that hover around 1,200 by 2,400 dpi can still produce sharp images at larger print sizes. If you're not a photographer and you only want to print color business documents with minimal images, you can most likely get away with a cheaper, 600-by-1200-dpi printer.

### Should I get a four-color, six-color, or seven-color printer?

Four-color printers use four ink colors—cyan, magenta, yellow, and black. Six-color printers have two additional colors: a lighter-density magenta and a lighter-density cyan. Serious photographers will want the six-color printer, because images, particularly in areas of light color, look far more natural with the two lesser-density inks. Epson's new Stylus Photo 2200 is the first consumer seven-color printer to date. The seventh, a lighter-density black, reduces graininess and improves gradation quality.

### Should I use dye- or pigment-based inks?

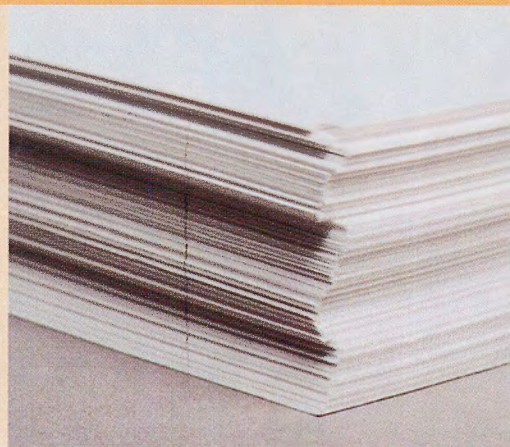
If you're printing photos to last a long time, choose a printer that uses a pigment-based ink, such as Epson's Stylus Photo 2200. Pigments are like tiny rocks of color that lodge themselves in the tiny crevices of the paper fiber. Because they are in a solid state all their life, pigments resist fading, running water, and contaminants better than dye colorants, which are soluble.

### What's a picoliter?

A picoliter is a trillionth of a liter, and it's the unit used to measure of a drop of ink from an inkjet printer. The smaller the droplet, the more precisely your printer can place dots on the page, and the better image you get. Some printers, like those by Epson and Canon, use one fixed picoliter size. Other printers, like Lexmark's Z65, have more than one droplet size within one printer: The smaller size provides fine detail in areas that have subtle gradations of color (like a polar bear playing in snow), while the larger size provides more uniform color in background areas (like a blue sky).

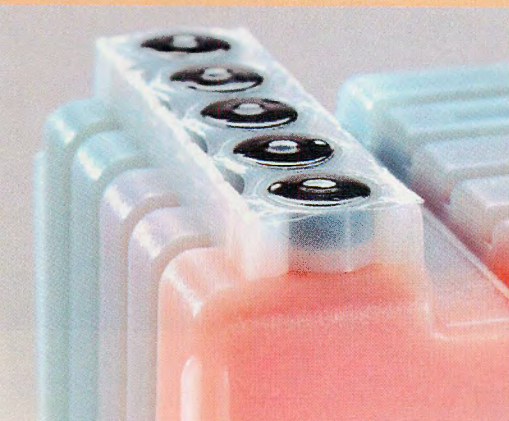
### What kind of paper should I buy?

While the style of paper you get is up to you (matte, glossy, textured, etc.), make sure what you buy has been specifically designed for your brand of inkjet printer. Most printer manufacturers sell paper for their printers, but you can also get third-party paper that's been optimized for your printer's inks. If you're printing photos using dye-base ink and you want them to last, get a gelatin-coated glossy paper. While it's not very water resistant, it resists fading.



### What are Micro Piezo, Thermal Bubble, and Bubble Jet?

These are fancy names that describe the two ways printers put ink on a page. One way is thermal. Printers heat the inks to create the pressure required to spew the inks out of the cartridges. Canon's Bubble Jet printers and HP's Thermal Bubble printers use this method. The other way, created by Epson, is mechanical. Called Micro Piezo, this method uses mechanical pressure to expel the ink out of the printhead. So what's the difference? According to Fabia Ochoa, product manager of photo printers at Epson America, inks from thermal printers take slightly longer to dry because of the warming and cooling involved. According to John Lamb, product manager of imaging at Canon, thermal bubble printing doesn't clog the print heads as often as Micro Piezo printing does.





# Connect

## TANGO™ FireWire®/USB

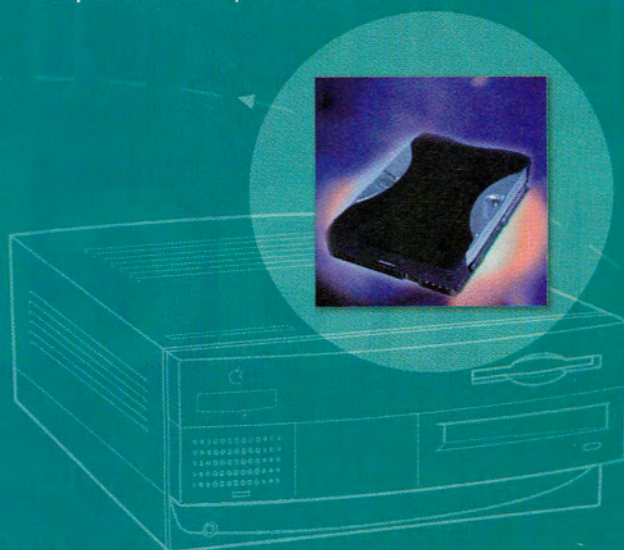
- Macintosh® combo card installs in minutes
- Compatible with most PCI Macintosh computers
- Supports all industry-standard FireWire & USB peripherals



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## TEMPO™ ATA100

- Macintosh PCI host adapter card
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- Add up to 4 internal ATA/IDE hard drives



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## PICCOLO™

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Do it all...

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# Dream Machines

**Imagine that money is no object and the sky's the limit.**

That's what we did when we dreamed up these five amazing systems for everyone from the graphic designer to the couch potato, even the everyday Mac user.

by the **MacAddict** Staff

photography by **Mark Madeo**



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For all you [redacted] designers, desktop publishers, [redacted] digital illustrators, this is the system you've been dreaming of.

### The Ultimate Home Mac p26

If you do a little bit of everything on your Mac, this setup is for you and will have all of your friends oozing envy.

### The Audio & Video Mac p28

How could we possibly spend more than \$100K on one machine? Oh, believe us, it's possible...

### The Mobile Mac p30

Be the coolest person at your next business conference with this dreamy transportable setup.

### The Couch-Potato Mac p32

Make your Mac the center of an ultimate home theater, complete with plasma display and La-Z-Boy (naturally).

### Dream Machines Product Finder p34

Of course, you need to know where to buy all of this swag—here's all the shopping info you need.





# The Artist's Mac

Art on the Mac is a full-brained affair. The creative left lobe wants to explore a palette of 16 million colors and hundreds of brush strokes. The rational right lobe tells you to back up those files regularly. Here's what you need to satisfy your whole head.

## SYSTEM

The artist's choice is naturally a dual-processor Power Mac G4 1GHz stuffed with 1.5GB of RAM and 80GB of internal disk space.

### A Apple Dual Power Mac G4 1GHz with 1.5GB of RAM, \$3,599

You'll need the dual processing for all those Photoshop filters.

### B Kensington Technology Group Studio Mouse, \$60 (ESP)

This mouse, created for designers, has zoom and pan buttons.

### Orange Micro OrangeLink Plus FireWire/USB 2.0 Card, \$119

Add USB 2.0 and extra FireWire ports via this PCI card.

### Adaptec XHub7+, \$139.99

This attractive seven-port USB hub even handles USB 2.0.

### Logitech 3-Port FireWire Hub, \$59

You'll need more FireWire ports for all your peripherals.

### C Pantone Formula Guides, \$119

Pantone's color-matching swatches are de rigueur for print designers.

## DISPLAYS

Since what you see is what you get, you need a spacious display, set up with precise color controls and room for all your palettes.

### D LaCie Electron 22blue III, \$999

This hooded 22-inch CRT comes with three USB ports.

### LaCie Blue Eye, \$499

This hardware color calibrator works with the Electron 22blue III.

### E Sharp Systems of America 18-Inch LCD, \$1,199

The 10-bit gamma on this LCD displays 1 billion colors.

### F Wacom Technology Cintiq 18sx, \$3,499

This drawing tablet and LCD gives you 512 levels of pressure sensitivity. (See *Reviews*, p48.)

### DVI Extractor, \$34.95

You need an ADC-to-DVI adapter for the LCD's DVI ports.

### ATI Radeon 7000 Mac Edition, \$129.99

Plug one of your three displays into this PCI video card.

## SOFTWARE

Whether you're a fine artist, a graphic designer, a photographer, or an illustrator, check out these professional-level applications that can create whatever you can dream up. All but QuarkXPress run natively in Mac OS X.

### Adobe Photoshop 7, \$609

Hands-down the most powerful image-editing app out there.

### Adobe Illustrator 10, \$399

Meet the King of vector-drawing apps.

### QuarkXPress 5, \$899

The industry-standard desktop-layout tool, but it's still Classic-only.

### Procreate Painter 7, \$479

Enjoy hundreds of brush, paint, and paper styles.



## DIGITAL IMAGING

The Mac artist needs state-of-the-art peripherals to carefully capture, create, and output images that are as beautiful and vivid as what the imagination sees.

### **Epson Expression 1680 Pro FireWire, \$1,399**

This pro-level 48-bit FireWire scanner gives you 1,600-by-3,200-dpi resolution.

### **Kyocera Optics Contax N Digital, \$6,999**

A 6.29-megapixel digital SLR camera—and a photographer's dream.

### **Epson Stylus Photo 2200, \$699**

This seven-color, FireWire inkjet prints at 2,880 by 1,440 dpi.

### **Nikon Super Coolscan 8000 ED, \$2,995**

Who doesn't want a 4,000-dpi, multiple-format film scanner?

**Total Cost: \$26,233.83**

## Affordable ALTERNATIVES

If you're not a starving artist, but spending \$26,000 would make you one, these less expensive alternatives can more than pull their weight. After all, art is in your head, not your wallet.

### **Apple Power Mac G4 800MHz with 256MB of RAM, \$1,599**

A more than ample system for 2D artists.

### **Epson Stylus Photo 820, \$99**

This printer gives you great six-color quality.

### **Canon CanoScan N1240U, \$149**

This 48-bit USB scanner gives you 1,200 by 2,400 dpi.

### **Nikon Coolpix 995, \$599**

A solid 3.2-megapixel camera that comes with 4X optical zoom.

### **Wacom Intuos2 6X8 Tablet, \$349.99**

A smaller tablet with twice the Cintiq's pressure sensitivity.

### **Adobe InDesign 2.0, \$699**

These days, this program is challenging QuarkXPress with its superb text and transparency tools.

### **Stone Design Stone Studio, \$299**

Seven bundled apps for this price—you can't beat it.

**Total Cost: \$3,793.99**

## STORAGE

As an artist, you need to manage large files, back up your systems, and take work home. These devices make mundane drudgery fun...or at least palatable.

### **SmartDisk FireFly 5GB, \$199.95**

This cute 5GB drive is the modern-day Zip disk.

### **Maxtor Personal Storage 3000XT, \$399.95**

Use this massive FireWire 160GB drive to store those hefty projects.

### **Exabyte VXA-1 Drive, \$699**

The FireWire-connected VXA-1 makes tape backup easy.



# The Ultimate HomeMac

You're not a professional graphic designer, a digital musician, or a 3D animator. Still, you love your Mac just as much as they do, because it makes you productive and empowers you creatively. That's why you need a well-rounded collection of cool yet solid tools.

## SYSTEM

The top-of-the-line iMac is an eye-catching, space-saving, perfectly powerful machine for the home. Plus, it comes with all of the iApps and a slew of other software for work and fun.

**A Apple iMac G4 800MHz with 1GB of RAM and SuperDrive, \$2,449**

Mmm... SuperDrive.

**B Yamaha RP-U200 Personal Receiver, \$449**

This audio processor and receiver plugs into USB and is programmable.

**C Yamaha NS-P220 5.1 Surround-Sound Speakers, \$199**

Plug these five speakers and subwoofer into the receiver and you're set!

**Epson Stylus Photo 890, \$299**

This baby prints beautiful pictures and does text decently, too.

**D Microsoft Wireless IntelliMouse Explorer, \$74.95**

When one button just isn't enough. Bonus: Mac OS X drivers now available.

## BACKUP AND STORAGE

No Mac user should be without a viable backup system—or at least a quick way to transfer files between two computers, platform be damned.

**CMS Peripherals 120GB ABSplus, \$637**

A FireWire hard drive with an automatic backup system.

**Sonnet Technologies 128MB Piccolo, \$169.95**

A teensy USB Flash drive for quickie file transfers.

## DIGITAL HUB

You've got the coolest all-in-one computer on the planet. Now it's time to plug in your digital gadgets.

**Apple iPod 10GB, \$499**  
Room for 2,000 of your favorite songs.

**Olympus Camedia E-20N, \$2,249.95**  
A 5-megapixel digital SLR for great-looking pictures.

**Sony DCR-TRV18 DV Camcorder, \$799.99**  
It's new, it's portable, and it's cheap.

**Palm m515, \$399**  
Beautiful color screen in a device thin enough to fit in a shirt pocket.

**E Belkin 7-Port USB BusStation Hub, \$69.99**

You need somewhere to plug in all of your toys, don't you?

## EXTRAS

Do you need these things? Not really (except maybe that USB cable). Do they make your Mac cooler? You'd better believe it.

**logear USB 2.0 6-foot Cable, \$14.95**

For a printer (or any other peripheral) that ships without a USB cable. Grr...

**F Griffin Technology PowerMate USB Multimedia Controller, \$45**

A cool blue light illuminates this knob.

**Gap Relaxed Fit Flat Front Khakis, \$39.50**

A good pair of khakis (with a flat front, of course) is a must for everyone.

**Keyspan Digital Media Remote, \$49**

This infrared remote can control your multimedia apps from afar.

C

B

D

C





**Total Cost: \$10,201.13**

## SOFTWARE

You cool new iMac is nothing without a few key apps to make you productive and indulge your creativity.

### Microsoft Office v. X, \$499

This suite of Word, Excel, PowerPoint, and Entourage practically does it all.

### Adobe Photoshop 7, \$609

If you want the best image-editing program, this is the best. And it's ready for Mac OS X.

### Roxio Toast 5 Titanium, \$89.95

Much more powerful than Apple's built-in disc-burning software.

### Symantec Norton SystemWorks 2.0,

**\$129.95**

When things go wrong, Norton can save the day.

### Synthetik Software Studio Artist 2.0, \$379

This painting program offers a great way for kids—and adults—to get artistic.

### Aspyr The Sims, \$49.95

This simulation game is more fun than you'll ever have in real life.

## Affordable ALTERNATIVES

The low-end iMac is nothing to sneeze at, and neither are any of these other products. And don't forget—the iMac comes with AppleWorks, so you can skimp on Microsoft Office if you want.

### Apple iMac G4 700MHz with 128MB of RAM and CD-RW drive, \$1,399

It burns CDs and packs plenty of power.

### Apple Pro Speakers, \$59

Sorry, the low-end iMac doesn't include them.

### Epson Stylus C60 Inkjet Printer, \$99

The price is right.

### Olympus D-520 Zoom, \$299

This respectable 2-megapixel camera helps you capture the memories.

### Handspring Visor Neo, \$169

This basic Palm PDA comes in three colors.

### TDK CD-R Media (50-Pack), \$29.99

You need some way to back up your system.

### Lemke Software Graphic Converter, \$30

Good for editing images, and much cheaper than Photoshop.

**Total Cost: \$2,084.99**



# The Audio & Video Mac

These days, the majority of all hard disk-based music and film projects get done on a Mac. And with Apple's illustrious Final Cut Pro, many DV pros are abandoning their turnkey systems altogether. To create the ultimate professional-looking and -sounding projects, you'll want the best equipment money can buy. Consider these cream-of-the-crop components for your audio-video workstation.

## SYSTEM

The ultimate system requires Apple's ultimate Mac. With music and video, bigger is better. Mega memory and a vast hard drive are both key elements.

**A Apple Dual Power Mac G4 1GHz running Mac OS 9.2.x with 1.5GB RAM, Two 80GB Hard Drives, and SuperDrive, \$3,849**  
Size does matter.

**B Apple Cinema HD Display, \$3,499**  
A generous 23 inches of screen real estate—and with timeline-based apps, every inch helps.

**Digidesign Pro Tools|HD 2, \$9,995**  
Two PCI cards that allow your Mac to communicate with Pro Tools hardware.

**Digidesign SCSI64 Kit, \$545**  
Pro Tools requires a fast SCSI hard drive for recording—hence, this card.

**Digidesign DigiDrive 73|10k, \$1,550**  
Provides vast storage, speed, and compatibility.

**Pinnacle Systems CineWave RT, \$9,995**  
This system combines a PCI card and breakout box for superb, uncompressed, real-time DV editing.

## MISSION CONTROL

Why work with a mouse and keyboard? A connected console and interface system puts total control at your fingertips—literally.

**C Digidesign Pro Control with Edit Pack and Two Fader Packs, \$32,480**  
Provides 24 channels to record, edit, and master audio, plus surround-sound-editing capability.

**D Digidesign 192 I/O, \$3,995**  
Provides 16 channels of analog and digital I/O. Get two.

**Digidesign Pre, \$2,495**  
Hook mics and instruments to this 8-channel preamp.

**Digidesign MIDI I/O, \$595**  
Connects samplers, synths, and other MIDI widgets to the audio system.

**E Digidesign Sync I/O, \$2,095**  
Locks audio and video tracks together in harmony.

## PERIPHERALS

Attach these important devices to round out your ultimate AV system.

**F Canon XL1S DV Camcorder, \$3,999**  
The Mercedes SL600 of DV cameras.

**G TDK FireWire veloCD, \$179.99**  
Burns music lickety-split and looks cool, too. (See *Reviews*, p54.)

**H Sony PVM-20M4U 20-Inch Monitor, \$2,599.95**  
View video work as the TV world will see it.

**I Genelec 1031A Monitor Speakers, \$3,798 a pair**  
Hear what you're editing. Get five speakers total. Use two for mixing music, all five for surround sound.

**Genelec 1092A Subwoofer, \$2,149**  
Monitor the bottom end of surround-sound mixes.





**Total Cost: \$100,842.89**

## SOFTWARE

You'll need these applications to create commercial CDs and DVDs.

### Digidesign Pro Tools, bundled with Pro Tools | HD 2

The virtual brains of the audio operation.

### Apple Final Cut Pro 3, \$995 or bundled with CineWave

Slices, dices, and juliennes DV footage without compromise.

### Adobe AfterEffects, \$649

The indisputable champ for building motion graphics and text.

### Discreet Combustion 2, \$4,995

An awesome tool for creating special effects.

### Discreet Cleaner, \$599

Ensures that video footage looks pristine, whether it's in DVD or streaming format.

### Roxio Toast 5 Titanium, \$89.95

Burns CDs like no other.

### Apple DVD Studio Pro, \$999

Use this to author projects to DVD.

## Affordable ALTERNATIVES

OK, most folks don't have this kind of disposable income. No problem.

### Apple iMac G4 800MHz running Mac OS 9.2.x with 768MB of RAM, 60GB Hard Drive, and SuperDrive, \$2,149

Powerful, with the ability to burn CDs and DVDs.

### Mark of the Unicorn 828, \$795

Connect mics and instruments via FireWire, and record and edit sound with the included AudioDesk software.

### MidiMan USB MIDIport 2X2, \$99.95

Get MIDI via USB.

### Discreet Cinestream, \$499

Not as pricey as Final Cut Pro, yet features everything you need for video production.

### Sony DCR-TRV18 DV Camcorder, \$799.99

One of the best low-cost DV cameras.

**Total Cost: \$4,342.94**



# The MobileMac

If you're a PowerBook-packing road warrior, you have two choices: You can travel light, or you can travel prepared. While we doubt you'll need all the products we recommend, choose the ones likely to make your next trip a success—or the ones you wish you'd had last time out.

## SYSTEM

There's no better laptop on the planet than a PowerBook G4—after you fill it with 1GB of RAM and upgrade its internal hard drive.

**A Apple PowerBook G4 800MHz with 1GB of RAM, Combo Drive, AirPort Card, \$3,599**

So you were expecting maybe a Dell Latitude?

**Apple PowerBook G4 Battery, \$129**

It's expensive, but a spare can be a lifesaver.

**BookEndz Titanium Docking Station, \$244.95**

Cut cable clutter when you're back home.

**B Cyber3 Tote & Tilt Handle, \$44.95**

Looks cool and props up your TiBook to keep it cool.

**C Dr. Bott TiCasePlus, \$539**

Hard-shell protection, soft-shell expansion.

**D Kensington Technology Group PocketMouse Pro, \$39.99**

A traveling mouse that eats its own USB tail.

**Other World Computing IBM Travelstar 60GB Internal Drive, \$519**

Bigger than the stock TiBook drive.

## CONNECTIONS

Take along travel versions of all the connectors you'll need, especially Ethernet and modem cables plus a mini USB hub.

**Belkin RJ-45 CAT-5e UTP Crossover Cable, \$9.95**  
Connect to Macs, PCs, and printers in a snap.

**Keyspan USB 4-Port Mini Hub, \$49**

Yes, even a portable USB hub can be stylish.

**Targus Retractable Network/ISDN Cord, \$24.95**

An RJ-45 Ethernet cable is coiled snugly inside.

**Targus Retractable Phone Cord, \$19.95**

Like the Ethernet unit, but it's for your modem.

## ACCESSORIES

The right set of travel necessities can conquer any problem—even retrieving that last cocktail olive from the bottom of the jar.

**E Kensington Technology Group Platinum FlyLight, \$19.99**

Stay productive during the in-flight movie.

**Leatherman Flair Multitool, \$49.99**

Pliers, corkscrew, cocktail fork—this tool has it all.

**F MadsonLine Auto/Air Adapter, \$78**

Juice your TiBook in your car or in that first-class seat.

**G Targus DefCon 1 Ultra Alarm, \$39.99**

Clip this to your bag and deafen the baddies.

**Targus World Travel Connection Kit, \$99.99**

Be ready for anything, Mr. or Ms. International.

## STORAGE

With this versatile trio, you'll be ready for anything your client hands you.

**LaCie Hexa Media Drive, \$59.95**

There's no memory card this cutie can't handle.

**H MCE Technologies 60GB Transport Pro, \$699**

Transport massive files and look cool doing it.

**SmartDisk USB Floppy Drive Titanium Edition, \$59.95**

Yes, some PC-hobbled clients still use floppies.

## PRINTING

Need hard copy? Whip out your mobile Canon printer. Attach a scanner cartridge, and your PowerBook morphs into a photocopier.

**Canon BJC-85 Color Bubble Jet Printer, \$299**

Need color prints when you're on the run? Here's your printer.

**Canon IS-12 Color Image Scanner Cartridge, \$99**

Clip this on, and presto—instant scanner!



**Total Cost: \$7,800.54**

## DIGITOYS

These aren't exactly PowerBook accessories—but they're exceptionally valuable travel partners.

### **1 Handspring Treo 180, \$399 (with service activation)**

Browse the Web, stay organized, and phone home with this cell phone/PDA.

### **Olympus DS-330 USB Docking Voice Recorder, \$149**

Record your ideas, then email 'em home.

### **Sony MDR-NC10 Noise Canceling Fontopia Ear-Bud Headphones, \$199.99**

Block out that baby screaming in the next seat with your favorite DVD and these headphones.

## SOFTWARE

These travel buddies handle backup, remote diagnostics and file sharing, and virtually any printer you might encounter.

### **Dantz Retrospect Express, \$49**

It's a jungle out there—back up your work.

### **Netopia Timbuktu Pro Twin Pack, \$179.95**

Control your home Mac when you're on the road.

### **Strydent Software PowerPrint USB, \$99**

Not all printers are Mac friendly—make 'em be.

## Affordable ALTERNATIVES

Maybe you just want a nice lil' iBook companion for your frosh year at State. Don't buy the cheapest model—a Combo drive will encourage you to back up, as well as play all your DVDs.

### **Apple iBook (12.1-inch) PowerPC G3 600MHz with 128MB of RAM and Combo Drive, \$1,499**

Not the least expensive iBook, but it has a Combo.

### **Apple AirPort Card, \$99**

The world is going wireless. You should, too.

### **Brenthaven Mobility 1 iBook Messenger Bag, \$79**

It's light, it's sturdy, and it's damn good-looking.

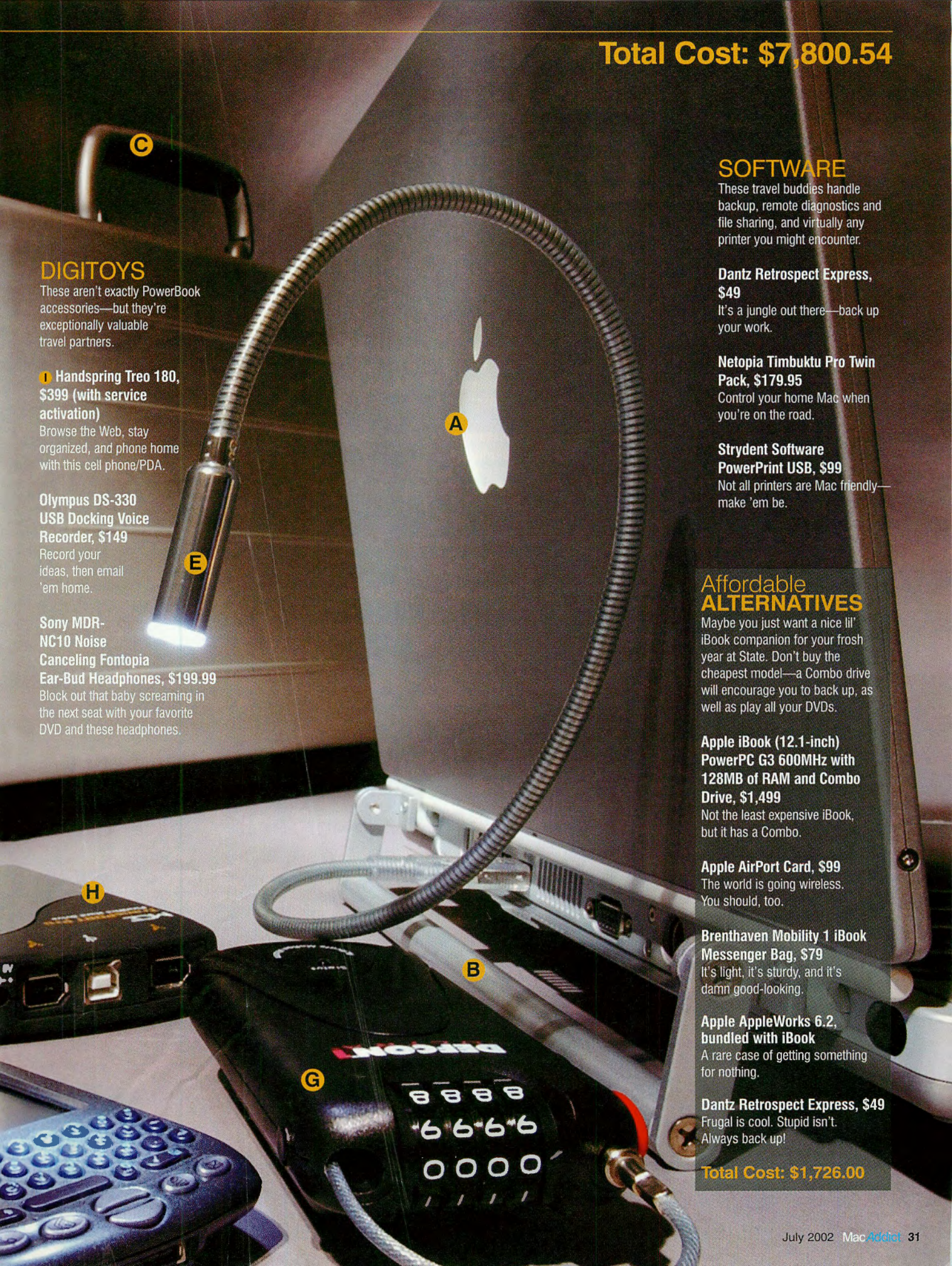
### **Apple AppleWorks 6.2, bundled with iBook**

A rare case of getting something for nothing.

### **Dantz Retrospect Express, \$49**

Frugal is cool. Stupid isn't. Always back up!

**Total Cost: \$1,726.00**





# The Couch Potato Mac

Steve Jobs's digital hub is small potatoes compared to the digital-entertainment hub we built. If you're into games, TV, movies, *really* big plasma screens, and vibrating chairs, this Mac setup will have you salivating.

## SOFTWARE

All you need are games, a Blockbuster card, and digital cable for passive entertainment. And, of course, something to make those game controllers work.

### Alessandro Montalcini USB Overdrive, \$20

Drives most any USB device in Mac OS 9 (the Mac OS X version is in beta as of press time).

### Aspyr 4x4 Evolution 2, \$39.95

A very addictive driving game.

### Pangea Software Cro-Mag Rally, \$20

It's a racing game, but this one works best with a gamepad.

### Activision Quake III: Arena, \$11 (ESP; from eBay)

Still the best game for eye candy (ear candy, too).

### Aspyr Return to Castle Wolfenstein, \$49.95

This first-person Nazi shooter is to die for.

### MacPlay Giants: Citizen Kabuto, \$49.99

A beautiful game with role-playing, strategy, and shooting. Does it get better than that?

## SYSTEM

You don't need dual-gig G4s and a SuperDrive to play games and DVDs. You need mega RAM and VRAM, along with a better DVD player.

### A Apple Power Mac G4 933MHz with 1.5GB of RAM and GeForce4 Titanium Video Card, \$3,299

More than megahertz matters—RAM and VRAM (128MB of it) also count.

### B Toshiba SD5700 Cinema Series DVD, \$399.99

SuperDrives are great, but progressive-scan DVD looks better.

### Formac Studio DV/TVR, \$999

A Mac-friendly version of TiVo.

### Maxtor DiamondMax 160GB Hard Drive, \$299.95

A big hard drive holds lots of games and recorded TV shows.



**Total Cost: \$27,461.68**

## SIGHT AND SOUND

For maximum entertainment consumption, you need maximum display and audio, right? We'll start with a jumbotronic HD plasma monitor and 5.1 digital surround sound.

**C Pioneer Electronics PDP-5030HD 50-Inch High Definition PureVision Plasma TV, \$15,500**

This baby takes VGA from the Mac and digital from the DVD player.

**D Bose Lifestyle 50 Home Theater System, \$3,499**

Decodes 5.1 digital from DVDs and interpolates 5.1 for games and TV.

**Olympus FMD-700 Eye Trek, \$1,199**

The goggle is the display (for private viewing).

**Sony MDR-IF630RK Wireless Headphones, \$169.99**

Play games all night without ticking off the neighbors.

## EXTRA OOMPH

A home theater system is nothing without your favorite chair and a few other necessities.

**La-Z-Boy Oasis Recliner, \$900**

Heaven is 41 inches wide, with a six-pack cooler in the armrest.

**Clark Synthesis Tactile Sound Transducer TST 429, \$599.99**

Bolt it into the La-Z-Boy and feel the noise!

**Anheuser-Busch Companies King Cobra 64-Ounce Malt Liquor, \$1.98**

Don't waste that armrest cooler on milk and cookies.

## CONTROLLERS

Sure, the Mac comes with a keyboard and mouse, but they suck for gaming (and aren't exactly La-Z-Boy friendly). Some devices *still* don't work with Mac OS X, unfortunately.

**E MacAlly iWebKey Wireless Keyboard, \$79**

Of course you need a wireless board to surf the Web.

**F Gyration GyroMouse Pro, \$99 (plus \$29.95 for PS2-USB adapter)**

Operating sans wires or mouse pad, it's a couch potato's best friend.

**G Thrustmaster FireStorm Wireless Gamepad, \$39.99**

A gamepad works wonders for sports and action games.

**Saitek X45 Flight Controller, \$79.95**

You never know when you'll need a good joystick.

**Thrustmaster 360 Modena Pro, \$75**

Ferrari-style wheel and pedals for about 1/1000th of the price.

## Affordable ALTERNATIVES

For those of you who *didn't* win the lottery, a low-end G4 with a decent monitor and speakers is cheap when you pay, but not when you play.

**D Apple Power Mac G4 800MHz with Combo Drive, \$1,699**

The Combo drive looks as good as progressive-scan DVD on an LCD screen.

**Formac Gallery 1740 ADC, \$899**

Dreamy LCD monitor at a pinch-me price.

**Altec Lansing XA3021 Speakers, \$99**

This three-piece speaker set looks—and sounds—like da bomb.

**Gravis GamePad Pro USB, \$19.99**

If you're watching your budget, a gamepad is all you really need.

**El Gato Software EyeTV, \$199**

Watch and record TV on your Mac.

**Total Cost: \$2,915.99**



# DreamMachinesProductFinder

**Activision**  
(Buy from eBay or other auction site)  
**Quake III: Arena**  
\$11 (ESP), p32

**Adaptec**  
www.adaptec.com  
408-957-2550  
**XHub7+**  
\$139.99, p24

**Adobe**  
www.adobe.com  
800-833-6687  
408-536-6000  
**AfterEffects**  
\$649, p29  
**Photoshop 7.0**  
\$609, p24, p27  
**Illustrator 10**  
\$399, p24  
**InDesign 2.0**  
\$699, p25

**Alessandro Montalcini**  
www.usboverdrive.com  
**USB Overdrive**  
\$20 (OS X beta is free), p32

**Altec Lansing**  
www.alteclmm.com  
800-258-3288  
**XA3021 Speakers**  
\$99, p33

**Anheuser-Busch Companies**  
www.anheuser-busch.com  
800-DIAL-BUD  
**King Cobra 64-Ounce Malt Liquor**  
\$1.98, p33

**Apple**  
www.apple.com  
800-795-1000  
408-996-1010  
**AirPort Card**  
\$99, p31  
**AppleWorks 6.2**  
Bundled with some Mac models, p31  
**Dual Power Mac G4 1GHz with 1.5GB of RAM**  
\$3,599, p24  
**Dual Power Mac G4 1GHz with 1.5GB of RAM, two 80GB hard drives, and SuperDrive**  
\$3,849, p28  
**DVD Studio Pro**  
\$999, p29  
**Final Cut Pro 3**  
\$995 or free with CineWave, p29  
**Apple Cinema HD Display**  
\$3,499, p28  
**iBook (12.1-inch) PowerPC G3 600MHz with 128MB of RAM and Combo Drive**  
\$1,499, p31  
**iMac G4 700MHz with 128MB of RAM and CD-RW drive**  
\$1,399, p27  
**iMac G4 800MHz with 768MB of RAM, 60GB hard drive, and SuperDrive**  
\$2,149, p29  
**iMac G4 800MHz with 1GB of RAM and SuperDrive**

\$2,449, p26  
**iPod 10GB**  
\$499, p26  
**PowerBook G4 800MHz with 1GB of RAM, Combo Drive, AirPort Card**  
\$3,599, p30  
**PowerBook G4 Battery**  
\$129, p30  
**Power Mac G4 800MHz with 256MB of RAM**  
\$1,599, p25  
**Power Mac G4 800MHz with Combo Drive**  
\$1,699, p33  
**Power Mac G4 933MHz with 1.5GB of RAM and GeForce4 Titanium Video Card**  
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www.aspyr.com  
888-212-7797  
512-708-8100  
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\$39.95, p32  
**Return to Castle Wolfenstein**  
\$49.95, p32  
**The Sims**  
\$49.95, p27

**ATI Technologies**  
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905-882-2600  
**Radeon 7000 Mac Edition**  
\$129.99, p24

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www.belkin.com  
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310-898-1100  
**RJ-45 CAT-5e UTP Crossover Cable**  
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**7-Port USB BusStation Hub**  
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763-537-3601  
**Titanium Docking Station**  
\$244.95, p31

**Bose**  
www.bose.com  
800-999-2673  
**Lifestyle 50 Home Theater System**  
\$3,499, p33

**Brenthaven**  
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888-212-5301  
360-752-5537  
**Mobility 1 iBook Messenger Bag**  
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**Canoscan N1240U**  
\$199, p25  
**IS-12 Color Image Scanner Cartridge**

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**XL1S DV Camcorder**  
\$3,999, p28

**Clark Synthesis**  
www.clarksynthesis.com  
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303-797-7500  
**Tactile Sound Transducer TST 429**  
\$599.99, p33

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714-424-5520  
**120GB AB3plus**  
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818-706-8545  
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925-253-3000  
**Retrospect Express**  
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Free with Pro Tools | HD, p29  
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www.exabyte.com  
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**Formac**  
www.formac.com  
877-436-7622  
**Gallery 1740 ADC**  
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**Studio DV/TVR**  
\$999, p32

**Gap**  
www.gap.com  
800-427-7895  
**Relaxed Fit Flat Front Khakis**  
\$39.50, p26

**Genelec**  
www.genelec.com  
508-652-0900  
**1031A Monitor Speakers**  
\$3,798 a pair, p28  
**1092A Subwoofer**  
\$2,149, p28

**Gravis**  
www.gravis.com  
800-235-6708  
650-572-2700  
**GamePad Pro USB**  
\$19.99, p33

**Griffin Technology**  
www.griffintechnology.com  
615-399-7000  
**PowerMate USB Multimedia Controller**  
\$45, p26

**Gyration**  
www.gyration.com  
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408-255-3016  
**GyroMouse Pro**  
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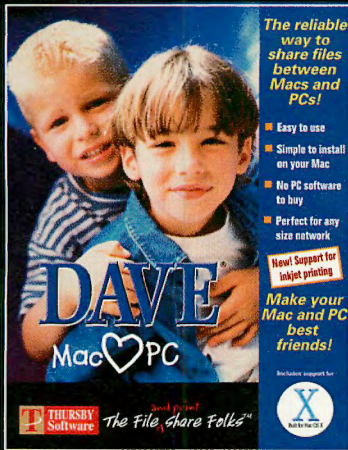
**Toshiba**  
www.toshiba.com  
888-241-5874  
**SD5700 Cinema Series DVD**  
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**Thrustmaster**  
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360-896-9833  
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# DAVE<sup>®</sup> SAVED MY MAC

They were going to take our Macs away. Then I met DAVE.

## DINOSAUR FOUND IN OFFICE Manager Eaten Alive



## “DAVE SAVED MY SANITY”

IT Analyst Timothy Hixon, Los Rios Community College System explained, “We didn’t have time to learn another network operating system. The Macs needed to fit seamlessly and efficiently into our district’s computer network, which used Windows NT file servers. DAVE was the answer.”

## ALL THE BUZZ about DAVE

### SHARE FILES AND PRINTERS - Mac/PC, PC/Mac

“DAVE is, without any doubt, the best solution for integrating your Mac into a PC environment.”

-Univers Macworld



“Essential Tool Gives Macs  
Hassle-Free Access to  
Windows Networks... this  
product is a must-have.”

Shelly Brisbin  
Macworld Magazine



## How did DAVE save your Mac?

Write us and tell us your story of how DAVE solved your problem.

The entries chosen for publication will be awarded a special Thursby attache'. Send entries to: [DAVE-stories@thursby.com](mailto:DAVE-stories@thursby.com)

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and print  
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**A**rtists, illustrators, photographers, and pixel pushers everywhere: Photoshop 7 is here (yes, for Mac OS 9 and OS X). We'll take you through some of the newest and coolest features of Adobe's powerhouse image editor.

## PHOTOSHOP 7.0

DEVELOPER: Adobe Systems

CONTACT: [www.adobe.com/products/photoshop](http://www.adobe.com/products/photoshop)

PRICE: \$609, \$149 upgrade from earlier versions

Mac users have been waiting for what seems like eons for Adobe to offer a Mac OS X version of Photoshop. But good things come to those who wait...and wait...and wait. According to Adobe, it took some doing to Carbonize Photoshop. Also, the company wasn't content to release a mere Mac OS X port of the product—it wanted to give consumers new and exciting features. Well, Adobe certainly has delivered on that promise. Photoshop 7 offers a plethora of cool new tools that should appeal to all. We show you to the best new features—including the latest image-repair tools, a new painting engine, much-needed organizational tools, and updated Web features—and show you how to get the most out of your Photoshop experience. (Also, see our review on p46.)

# Discover Photoshop

by STEVE  
ANZOVIN



# Heal Your Images

Cosmetologists would love Photoshop 7 for its new focus on renovation and rejuvenation. Instead of mud packs, Dead Sea salts, and Oil of Olay lotion, Photoshop 7 offers the healing brush, for smart repair of image imperfections; the patch tool, which in essence applies a Band-Aid to larger areas of your image; and the Auto Color command, a kind of skin peel for automatically removing color casts.

## Healing and Patching

Most powerful and useful of Photoshop's new tools is the healing brush, which is like the clone tool you know oh-so-well, but with this difference: The clone tool replicates the exact source area you've chosen for cloning, while the healing brush modifies pixels cloned from the source area to match the color and tonal qualities of the destination area. Strokes painted with the healing brush blend naturally into the underlying image for a seamless touchup.

A variation of the healing brush is the patch tool, which uses the same cloning-and-blending approach, but as a selection. Use the patch tool when you want to fix up larger areas; use the healing brush for repairs in hard-to-select shapes or fixes that require multiple strokes.

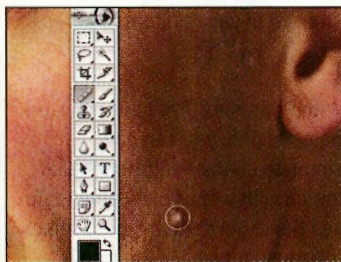
The face in this photo has a couple of blemishes. We'll tackle that big one near his jaw.

**1** Select the healing brush (the icon looks like a Band-Aid) from the toolbar. Choose Healing Brush Tool from the pop-up menu.

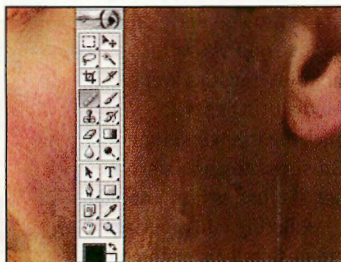
**2** Choose a brush size just a little wider than the area you want to fix; 35 pixels will do here.

**3** Option-click an area just above the blemish that is similar in color and value to the area surrounding the blemish.

**4** Paint out the blemish. One click does it. (For even better blending, repeat this operation, using a source area just below the blemish.) The fix blends perfectly with the surrounding area.



Use the new healing brush to take care of this blemish.



One click is all you need—no Clearasil required.

## Healing Tips

- Select a brush size just slightly larger than the size of the area you want to heal.
- The destination area should be similar in color and value to the source area.
- Use smooth strokes and, if necessary, apply the blur tool for a final touchup.

## Auto Color Tips

- Works best on images with a perceptible overall color cast, such as those produced by many inexpensive digital cameras or conventional daylight film shot under fluorescent lights.
- It's still best to correct flesh tones by careful hand-tweaking of color balance and levels, not via automation.

## Auto Color

Further cosmetic automation comes in the form of Auto Color, which adjusts the contrast and color of an image by removing consistent color casts and punching up the color of your image. For instance, the yellow pansy (top right) is definitely too green. You could play with the channel levels, but using Auto Color is much quicker. First, create a duplicate image using the Image > Duplicate command. Color-correct the duplicate by choosing Image > Adjustments > Auto Color. Now compare your images: You'll see that the duplicate pansy looks much more natural.



Before Auto Color.



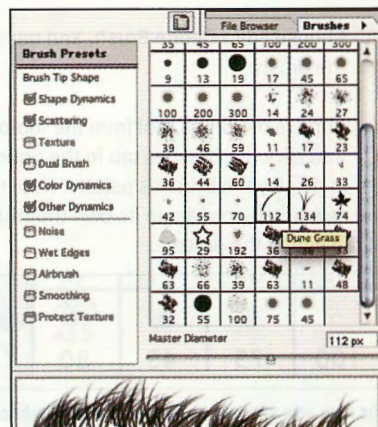
After Auto Color.

# Tools for Artists

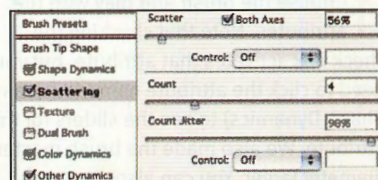
Procreate's Painter, with tools that mimic the look and feel of pencil, pastel, watercolor, oils, and other natural art media, has long been the choice of traditionally trained digital illustrators and artists. Up to now, Adobe has more or less ignored Painter, but Photoshop 7 starts a major turf war by offering many of the same painterly tools.

## Brushing Up

The revamped Brushes palette lets you set brush attributes and save them as a preset. You can also view brushes as a list, as thumbnails of various sizes, and as stroke samples (which show what a stroke would look like). You can change views by clicking and holding the arrow on the Brushes tab in the options bar (the horizontal toolbar at the top). In the actual palette, note the expanded number and types of supplied brushes on the right side, and the Brush attribute check boxes down the left. New brush attributes include tilt, jitter, texture, color dynamics, and shading—each main



The redesigned Brush palette has three views.

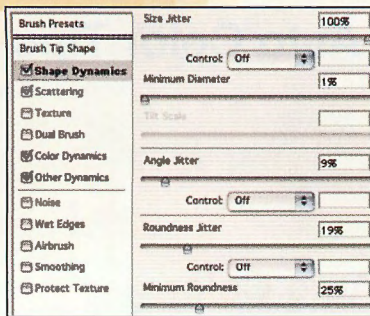


Scattering lays down several brush strokes at once.

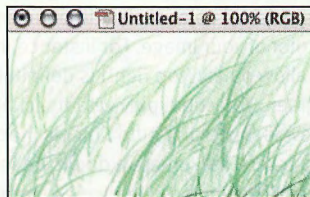


► attribute has several subsettings that you can view by clicking the attribute. Prepare to be impressed; the new options go way beyond Photoshop 6's anemic brush dynamics.

We've used the Dune Grass brush to paint some grass, shading darker to lighter colors to give an appearance of depth. Painting enough blades for a believable appearance of natural growth would be laborious in Photoshop 6, but Photoshop 7 can handle the job easily with the new brush attributes. The Scattering attribute allows you to lay down many blades of grass each time you stroke. Shape Dynamics tilts and turns each blade, and provides other settings you can control.



Shape Dynamics sliders control size and angle jitter, among other parameters.



This simple image of dune grass would have taken much longer to create without the new Scattering attribute.

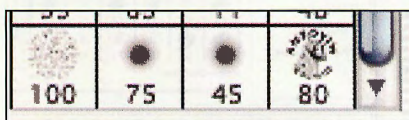
## Custom Brushing

Besides playing with the new brush settings, you can also create and save a custom brush preset from any image and apply any of the new brush attributes. For example, if you often use a logo or other image in your work, you can save it as a brush preset and have it at your beck and call. To create a brush preset from an image, do the following:

1 From the File Browser (see p39 for more info about the File Browser), open the image.

2 Choose Edit > Define Brush, and name the brush.

3 Choose the brush tool from the toolbar, and click the Brushes tab in the options bar to display the Brushes palette. Note that the new brush appears in its own thumbnail at the end of the presets.



The logo now appears as the last brush thumbnail.

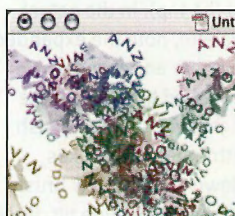
4 Choose the brush and play with the attributes. Note that checking the check box activates that attribute, but you need to click the attribute name (such as Shape Dynamics) to see the sliders for that attribute. We also made the brush master diameter larger. You can also change settings in the options bar, such as the painting mode (Normal, Dissolve, Multiply,



We'll turn this logo into a brush preset.



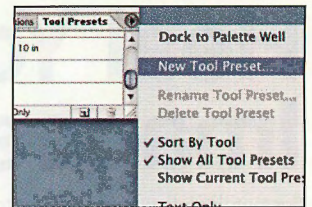
Choose Define Brush from the Edit menu, and type a brush name.



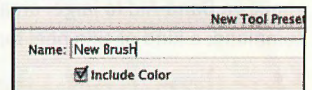
Set whatever brush attributes you like and start painting.

and so on), at this point. Once you're ready, start painting and watch the brush tool scatter your image about. If you choose another brush from the Brush palette, the presets you just created will transfer to that brush as well.

5 To save the Brush preset with all the attributes you've set, go to the Tool Presets palette, click the triangle to reveal a fly-out menu (Adobe's term for a drop-down), and select New Tool Preset. Name the brush, select the Include Color option, and click OK.

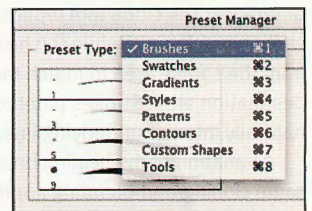


Define the brush with its attributes by choosing New Tool Preset from the Tool Presets tab.



Name your new tool preset and select Include Color.

6 To create a custom library of brush presets, save all of your custom brushes in a folder and put the folder within the Adobe Photoshop 7 > Presets > Brushes folder. The new folder name will appear when you click the triangle on the Brushes tab in the options bar. Selecting the folder brings up thumbnails (or a list or sample strokes) of your custom brushes.

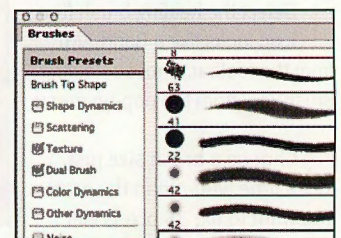


The updated Preset Manager tool (in the Tool Presets palette) helps you keep track of all the custom tools you've made.

## Paint Power

With Photoshop 7's newly revised paint engine, you can now simulate a range of traditional art media with wet and dry effects. To see these new brush types, select the brush tool, click the brush pop-up menu from the options bar to bring up the Brush palette, click the arrow in the upper-right corner of the Brush palette, and choose one of the libraries, such as Wet Media Brushes. (Or click the triangle on the Brushes tab and select a set of brushes from there.)

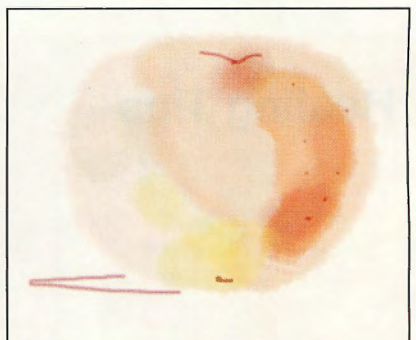
Painting into an image creates realistic watercolor effects. Varying the master brush diameter, painting mode, color, and dynamics yields a nearly endless number of painting possibilities, so you should definitely experiment with the many different options.



The new natural-media brushes include convincing watercolor brushes.



These presets are among those included in the new brush libraries.



We threw this watercolor of a peach together in about two secs (well, not literally).



# Organizational Bliss

If you're like us and you hoard images all over your drives, you'll be ecstatic over Photoshop 7's new File Browser—a feature Photoshop has needed for a long, long time (strangely, Adobe's consumer-level image editor, Photoshop Elements, already has it). The File Browser is a truly heavy-duty image organizer that enables you to catalog your pictures; create thumbnail libraries; search for, sort, and modify image information; and perform simple batch operations like image rotation. To see the File Browser, choose File > Browse (there's also a File Browser tab in the upper-right corner of Photoshop's options bar).

## Using the File Browser

The File Browser is a navigational dream, allowing you to view thumbnails of a folder full of images. The File Browser docks at the options bar by default, but you can drag it out by its tab if you want to see it elsewhere. See "The File Browser Window," right, for a look at its interface.

You can do lots of cool things with the File Browser. To rank images according to value, go to the View By menu (at the bottom of the File Browser window), select Large With Rank, and type rankings into the fields that appear under each thumbnail. Choose Rank from the Sort By menu to arrange thumbnails by rank.

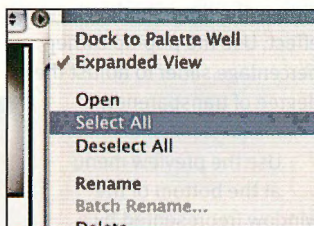
You can also rotate a batch of images clockwise or counterclockwise by 90- or 180-degree increments (nothing in between). First select the thumbnails. Then open the File Browser fly-out menu and choose the type of rotation you want—for example, Rotate 90° CW. Photoshop applies the rotation to the thumbnails and then to the files when you open them in the program—very convenient. Choose Export Cache from the File Browser fly-out menu to save thumbnail rotation and ranking info.



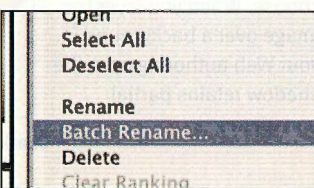
Choose a rotate option from the File Browser fly-out menu—all the selected thumbnails will rotate accordingly, and the files themselves will rotate when you open them.

## Rename in Batches

One exceptionally well-designed new feature of the File Browser is the ability to rename files in batches. As animators, we love this feature—for example, it makes it extremely easy to rename sequences of still frames to suit the needs of various motion-graphics programs. Some apps expect the frame number first, others require the number sequence to start with 000 instead of 001, and so on.



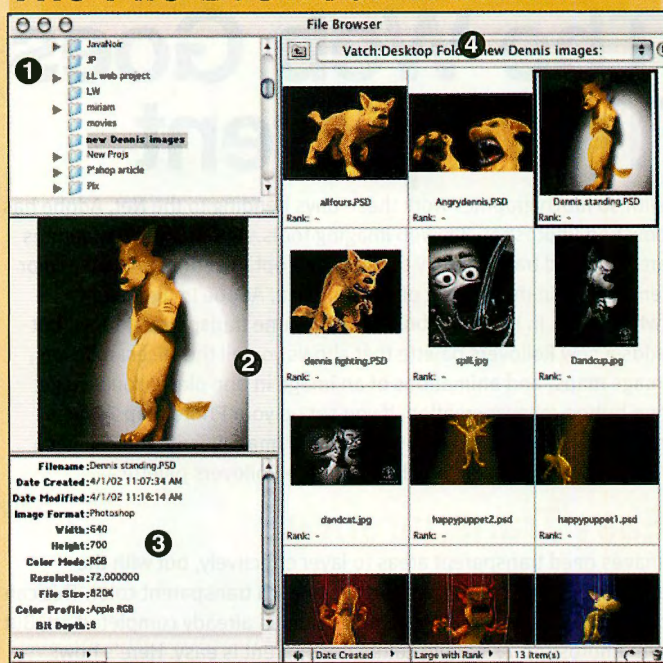
To rename all the images in the thumbnail pane, first do a Select All.



Then choose Batch Rename.

1 Select the images you wish to rename in the thumbnail pane, or from the File Browser menu, choose Select All, then Batch Rename.

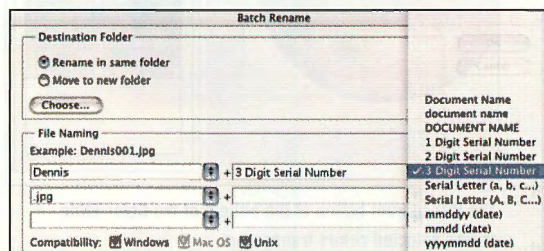
## The File Browser Window



- 1 This pane lets you navigate to a folder of pictures.
- 2 This pane shows the currently selected image.
- 3 You can find metadata here—info such as the file's name, size, and creation date. If the file includes EXIF (Exchangeable Image File) data, as do many pics from newer digital cameras, you'll also see data about image size and resolution in pixels, exposure settings, color mode, color profile, and so forth.
- 4 Here you'll find ranked and sorted thumbnails in various sizes. You can easily rearrange thumbnails using the Sort By menu at the bottom of the pane. Use the View By menu to set thumbnail size.

2 The Batch Rename box gives you a variety of renaming options. The Destination Folder area at top is for choosing the folder in which to save the renamed images. The File Naming area provides options for setting iterative naming parameters. Each field area has its own pop-up choices, or you can type in others. For example, use the upper-left field to set the base name. Use the upper-right field to add an iterating number to the name—01, 02, and so on. Use the middle-left field to select a file extension, such as .jpg. The format of the name appears at the top left of the File Naming area so you can keep track of your naming scheme as it develops. At bottom, you can set platform compatibility (say, to make file names compatible with Windows conventions).

By the way, renaming deletes batch-rotation and ranking info, so set up those *after* you rename. ▶



Set renaming parameters in the six provided fields.

## File Browser Tips

- Resize the panes by dragging any border of any pane.
- Move from thumbnail to thumbnail by pressing the Tab key.
- Command-click to select a series of discontinuous thumbnails.



# The Web Goes Transparent

With so much graphics work these days heading to the Net, Adobe has polished Photoshop 7's Web imaging tools. Among the new features are improved transparency options, text optimization, and easy color remapping. In the interest of convenience, Adobe ImageReady 7 (which ships in the same box) has the same transparency tools, but adds a new Rollovers palette that shows you all the slices, rollovers, image maps, and animations of an image in one place. You also get one-button rollover creation. If you set up your Photoshop 7 layers correctly, when you move the image into ImageReady, you can get a rollover by clicking just one button in the Rollovers palette.

## Easy Transparency

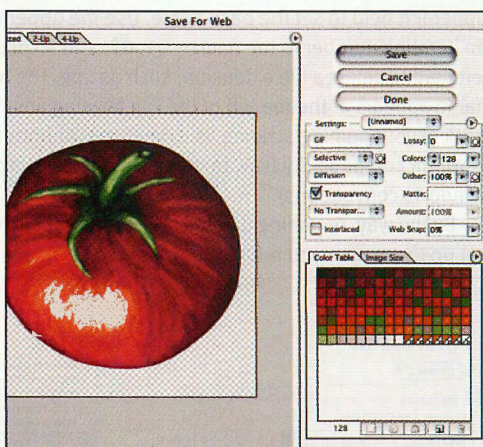
Images need transparent areas to layer effectively, but with the popular GIF format you have to specify each transparent color. This can be a pain when you want to remap colors in already completed art. But with Photoshop 7, making colors transparent is easy. Here's how:

**1** In the File Browser, open the image you want to remap. Choose File > Save For Web. Choose GIF in the Settings area and set Colors to 128. (This works best with a flattened file.)



Choose Save For Web to set the GIF and Color Table parameters.

**2** Select the Eyedropper tool (at the upper left of the Save For Web box), and, in the image, click the color that you want to remap to be transparent. Shift-click to select multiple colors.

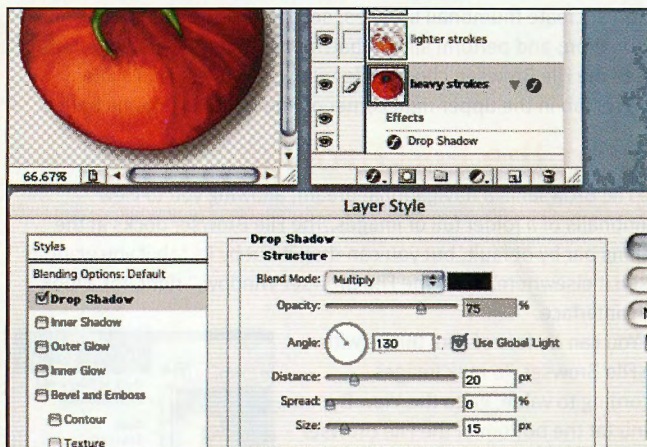


The transparent button at the bottom of the Color Table makes selected colors transparent.

**3** Click the transparent button (the square one that looks like a checkerboard below the Color Table) to remap the selected colors. To undo one or more colors, select them again in the Color Table and click the transparent button.

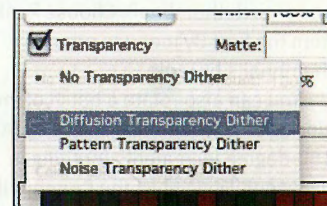
## Drop Shadows for the Web

Photoshop 7 offers another smart transparency option—Dithered Transparency. You need this because the GIF format does not support partial transparency, only 100 percent transparency—meaning you can't produce translucent effects, such as drop shadows, in that format. Dithered Transparency makes drop shadows possible by mixing fully transparent pixels with colored pixels, producing a partially transparent effect that works over any background. Here's how to create a drop shadow for the Web:

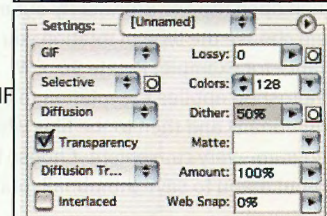


Apply a layer effect to make a drop shadow.

**1** Apply a drop-shadow layer effect to the source image by adding a new layer and selecting Drop Shadow from the Layer Style menu (in the Layers palette).



**2** Open the image in the File Browser and choose Save For Web from the File menu. In the settings pane on the right, select GIF for the file type, select 128 colors, and then choose Diffusion Transparency Dither from the Transparency options bar drop-down menu. This automatically dithers the drop-shadow layer effect. Use the pop-up Dither percentage slider to adjust the degree of transparency.



Choose Diffusion Transparency Dither (top) and then set the transparency percentage (above) using the slider that appears when you click Amount.

**3** Use the preview menu at the bottom of the window (represented by a globe icon) to see the graphic in any browser you choose. When you layer the image over a background in your Web authoring app, the shadow retains partial transparency. ■



Check out the tomato's dithered shadow.

When Steve Anzovin needs a calimative to help him get through bouts of producing 3D animation at Anzovin Studio, he always reaches for Photoshop before Prozac.



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# Mac OS

## Insider Tips

In the good ol' days of Mac OS 9, you were a Power User. You knew every keyboard shortcut, you could find every Easter egg, and everything was smooth sailing. Then along came Mac OS X, where even the simple keyboard commands you've grown to love do unexpected things (like the way that Command-N opens a new window instead of a new folder—we're still getting used to that one). At first glance, it might seem as if all the fun is gone.

Well, that's not exactly true. You just have to know where to *find* the cool shortcuts again. To help you milk Mac OS X for all it's worth, we went straight to the source: Apple. We picked the brains of various Apple insiders to get their best secrets for using Mac OS X, as well as the different iApps (iMovie, iPhoto, and iTunes).

We also scoured the Net, talked to other OS X users, and came up with a few tips of our own.

Keep in mind that OS X is constantly developing, so while all of these tricks work under Mac OS 10.1.4, some might not work in the future. Also, as always, Apple will add new shortcuts and tricks. So stay on your toes and keep on searching for more hidden treasure.

## Apple Execs Spill the Beans on Their Favorite Tricks

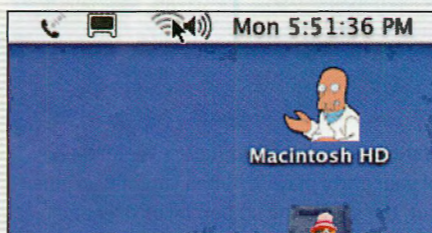
by David Schloss



# Power Finder

The heart and soul of OS X is the Finder, the venerable navigation tool that's as old as the Mac itself. No one knows the Mac OS X Finder better than Ken Bereskin, worldwide product marketing manager for OS X. We asked him to uncover some of the gems locked inside OS X, and we also dug up some of our own.

Some of you probably don't know that **you don't have to settle for the menu bar as is.** You can Command-drag to rearrange the menu bar icons. Even better, you can remove icons from the menu bar by Command-dragging them off, complete with the Dock's trademark puff o' smoke.



Rearranging and removing menu bar items is almost as simple as rearranging icons in the Dock.

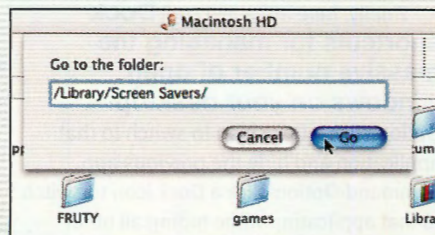
What if you want to retrieve the menu bar item you ditched? Dig down to the System > Library > CoreServices > Menu Extras folder, where you'll find a bunch of menu files, and Command-drag those to the menu bar. (Many programs, like the OS X System Prefs, let you restore menu bar items via their preferences.)

Click. Pause. Click. Pause. Click. Long pause. Click click. No, that's not Morse code, that's the sound of the typical Mac user navigating through the Finder's new Column View. Sure Column View is cool, but Bereskin says **there's a potentially faster way to get to a folder you want.** Just press Command-tilde (~) when you're in the Finder. You will see a dialog box that says Go To The Folder. Below that you can manually enter the path to the folder you want.

For instance, if you want to get to your Microsoft Office folder in your Applications folder, just type: `/Applications/Microsoft Office X`. The command assumes the hard drive's root level as its starting place. This magic box is not case sensitive, autocompletes as you type, and even takes you to invisible folders.

Say, though, that you don't have the memory of Rain Man so you don't have all of your folder hierarchies memorized. You may be more accustomed to navigating your system via the List View, which allows you to sort the contents of a directory by clicking a column's title, such as Date Modified.

The neat part of this feature is that **in List View you can use the keyboard to highlight a column to sort contents.** Just press Control-Tab or Control-I to cycle through the columns and change the sorting criteria of that window. Press Shift-Control-Tab or Shift Control-I to cycle backwards. This trick isn't just for List View, either. You can use the same keyboard commands to cycle through the active columns in Column View, as well as in an Open dialog box (click somewhere in one of the columns first to activate the window),



If you can remember where you store everything, Command-tilde (~) is a good way to navigate through layers of folders.

though it's generally easier to use the arrow keys for dialog navigation.

**Another cool set of Finder tricks involves the Finder toolbar,** which appears at the top of all open windows in Mac OS X. For instance, when it comes to customizing the Finder toolbar, you can choose not only what icons to include, but also how they show up—as icons, text, or text and icons. You can also Shift-click the toolbar widget (the little clear button at the top right that hides or reveals the toolbar) in any Finder window to jump right to the Customize Toolbar view.

The System Preferences pane features even more toolbar fun. For example, Command-clicking the toolbar widget in the upper-right corner toggles between the three toolbar views: text, icon, and text and icon view. This also works in any Cocoa application with a toolbar (such as Omniweb or Watson) and in some Carbon applications.

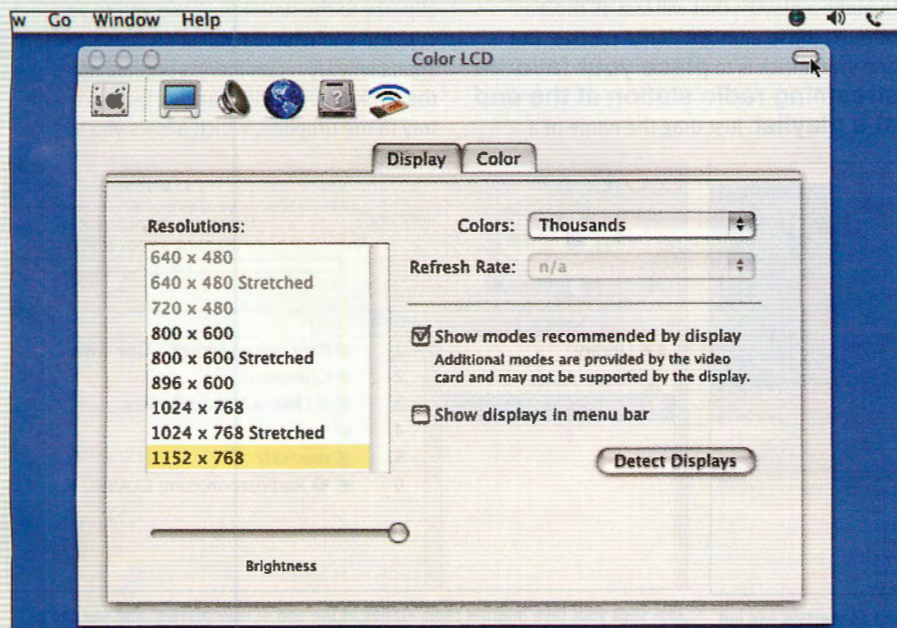
## A Better Dock

Love it or hate it, the Dock is here to stay. The most visible addition to OS X, the Dock is more intuitive and vastly more customizable than any ol' Windows Task Bar could ever be. And there are ways to supercharge it even further.

Many of you might know that you can switch between open applications by pressing Command-Tab (or Command-Shift-Tab to go in reverse).

But you can also **quickly quit and hide apps via the Dock.** While a Dock icon is highlighted, press Q to quit the application and H to hide the application.

If you think that's cool, get this: You can also **force-quit apps via the Dock**—no visits to the Apple menu, no pressing Command-Option-Escape to deal with a force-quit dialog. Simply click and hold a Dock icon, press the Option key, and Quit turns into Force Quit in the menu—quick and painless.



Customize the look of your Display Prefs toolbar by Command-clicking the toolbar widget.



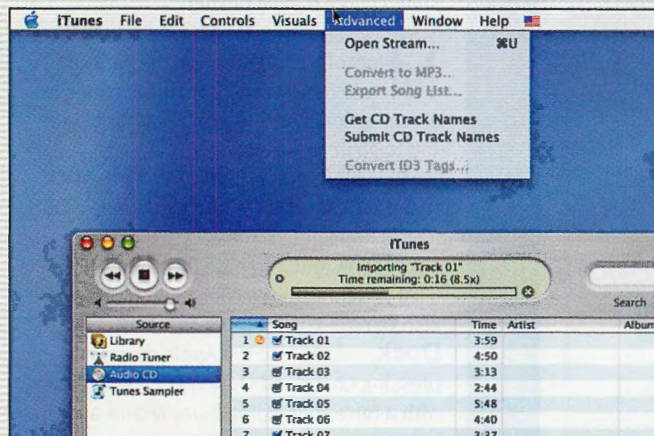
► Finally, here are a few cool **Dock shortcuts for managing the massive number of open windows on your desktop:**

Option-click a Dock icon to switch to that application and hide the previous app. Command-Option-click a Dock icon to switch to that application while hiding all other applications. Or Command-click a Dock icon to navigate directly to that file, folder, application, or hard drive in the Finder.

## Get the Most Out of Your iApps

Sure, it's great to master Mac OS X, but how often do you actually *work* in the Finder? Chances are, you spend more time in your favorite apps, namely the iApps that Steve has been extolling for the past few years. To help you get the most out of these fabulous apps, we talked to Xander Sore, Michael Uy, and John Santoro, Apple's product marketing managers for iTunes, iMovie, and iPhoto, respectively. We also came up with a couple of extra tips on our own, for good measure.

Among Apple's iApps, iTunes is arguably the most popular—after all, most of you probably listen to some form of music on your Mac. Perhaps the coolest thing iTunes does is automatically retrieve album information from the CDDB (compact disc database) on any CD you insert. The only downside is that if you rip a CD while you're away from an Internet connection—say, on a flight to Mac Expo (because according to Apple's commercial, it's OK to blast tunes from your iBook while you're on a plane)—all you see in iTunes is the generic *Track* followed by its number. Not pretty.

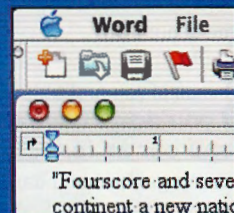


Rip all the music you want while you're away from an Internet connection and get all the album information the next time you connect.

## Cuckoo for Cocoa Tips

One of the nice things about Cocoa applications, which are written from the ground up to take advantage of all of OS X's cool interface tricks, is that developers can include advanced functions and neat features without having to write code to handle them. Ken Bereskin, Apple's worldwide product manager for OS X, showed us some of the best.

- Option-click a scroll bar arrow to scroll a full page at a time.
- In any Cocoa application, Command-3 copies a text selection's formatting. Command-4 pastes the formatting. Simply select some text and press Command-3 to grab the selection's formatting, and then select another block of text and press Command-4 to transfer the formatting without any menus or trips to a toolbar.
- Option-clicking a document's zoom, minimize, or close widgets (the green, yellow, and red buttons at the top-left of all windows) will affect all of that application's open windows. As a result, you can minimize, maximize, or close all windows with just one click.
- Bet ya didn't know that that little red widget at the top left of a document is good for more than just closing a window. When you make changes to a document, you will see a black dot inside the button until you save the document. Believe us, that's more useful than it sounds. (You'll also see this feature in some Carbon apps, such as Microsoft Office.)



That little black dot in the middle of the red widget in the upper-left corner of our document indicates that we haven't saved the latest version of our text.

### Fortunately, Sore says **you don't need to manually enter track info if you didn't get info from the CDDB on the first go-round.**

Just wait until you've got an Internet connection again, select the blank tracks, and choose Get CD Track Names from the Advanced menu. iTunes magically fills in all the information you need, restoring order to your playlists.

Want more? Then check out this cool piece of iTunes advice. Because it supports endless playlists, iTunes makes a natural jukebox for parties. Sometimes, though, it's impractical to make a playlist that will last all the way through those all-night dance parties. But one sweet trick is to **place your favorite streaming radio station at the end of a playlist.** Just drag the name of a

station from the Radio Tuner over to the end of your party playlist. When your music runs out, the streaming station takes over and keep you company until the sun rises.

If all-night parties and blasting music aren't your thing, perhaps family reunions and home videos are. iMovie revolutionized digital video by making it cheap and easy for anyone to edit a movie. Here are a few tips to make iMovie even easier to use.

If you ever cropped a clip or applied an effect that you later decided you didn't like, this one's for you. Dragging a clip from the clip tray to the timeline allows you to edit that clip, but you're still working on the original. That's why Uy recommends holding down the Option key while dragging a clip from the tray to the timeline, which allows you to



Just stick your fave Internet radio station at the end of your playlist, and you can rave all night.





Make a duplicate of your clip in iMovie by Option-dragging it from the clip tray.

**duplicate a clip and leave the original safely in the clip tray.** This allows you to quickly undo all your changes or use a clip several times in one project.

It's easy to apply a simple effect to a clip by clicking Apply, but there's also a way to **add multiple effects to a clip.** Click the Commit button in the Effects window, then click Apply, says Uy. This makes an effect permanent (so only do this when you're really sure you want the video of your child's birthday party to be in soft focus) and allows you to add effect upon effect.

Another challenge iMovie users face is creating movies that feature multiple titles with consistent settings. But Uy says there's a simple way to **make all the titles appear in matching styles.** Go to the clip with a title you want to mimic and click the Titles button under the clip tray. iMovie automatically pulls up all the settings from the original title. Just change the text and drag

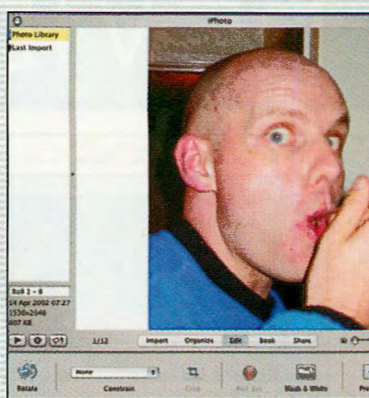
your new title onto the clip where you want it.

The latest member to Apple's collection of iApps is iPhoto. This free app allows you to import and organize your digital photos, as well as do a minor amount of image editing. One of the editing tools is photo rotation—this button is in the lower-left corner of the iPhoto window. If you press the button, it will rotate your photo counter-clockwise—that is, unless you try this trick provided by Santoro, which allows you to **rotate your pictures in the other direction.** Simply Option-click the rotation button to flip your images clockwise.

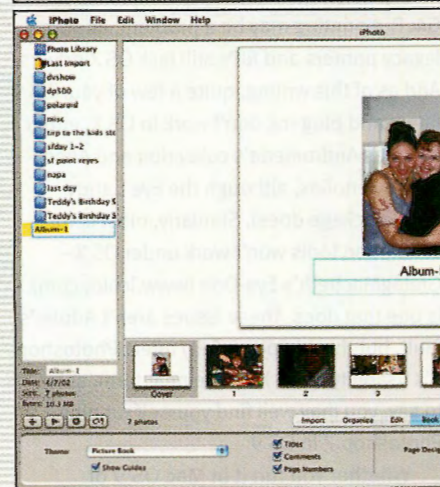
Finally, iPhoto has two great little **shortcuts that simplify life for those of you who spend enormous amounts of time managing your digital image collections.** To create an album, don't bother choosing New Album from the File menu, or clicking the plus (+) button in the



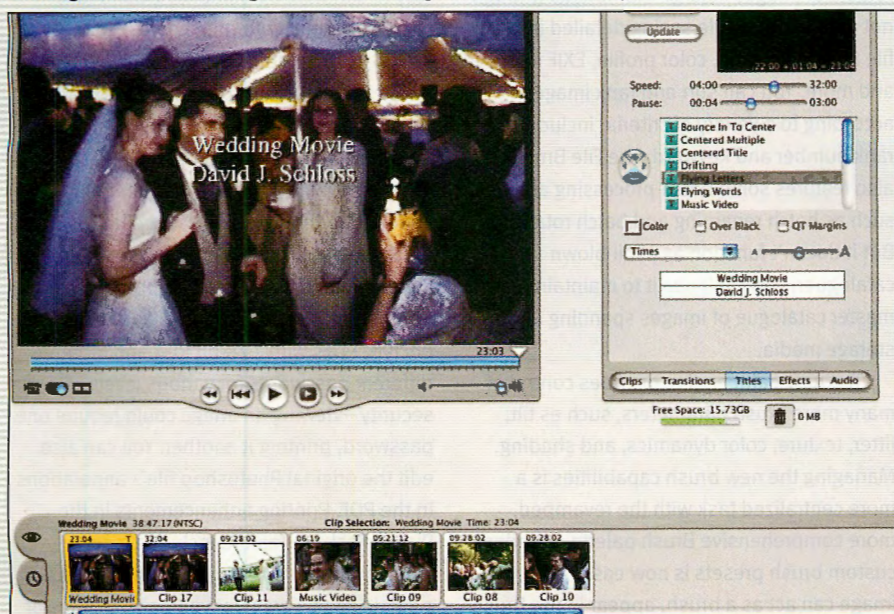
You can turn this picture (left) upright with one click instead of three. Just Option-click the Rotate button in iPhoto to turn your pictures in the other direction (right).



lower-left corner of the iPhoto window. Just select the images you want from the Photo Library, drag them to the library pane (the window on the left), and a new album appears—now all you have to do is enter a name for your album. You can also Option-drag the photos into the library pane to create a new book full of cheesy memories.



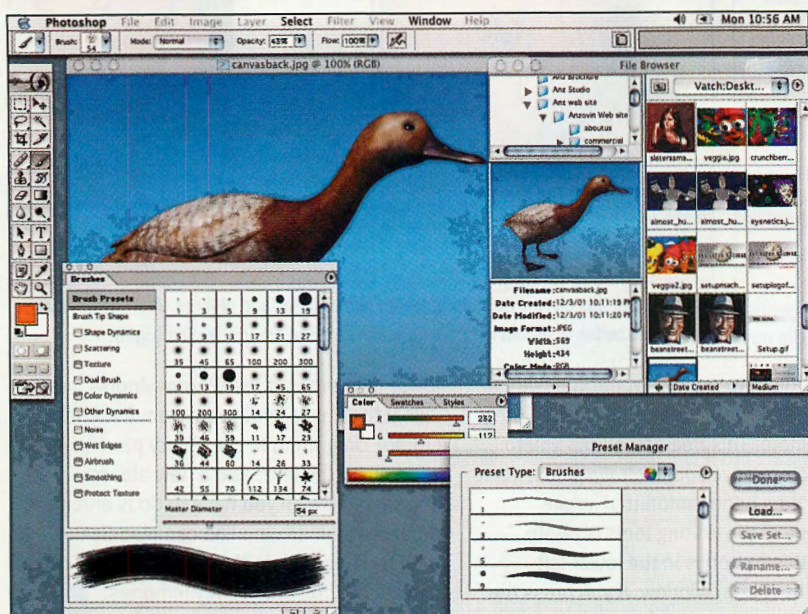
Hold down the Option key while dragging files from the Organize pane (top) to automatically create a new book (above).



To quickly pull up all the title settings you used previously, click the frame containing that title in the timeline.

David Schloss is a freelance technology journalist. When he's not working with computers, he can be found walking around his house trying to Option-click his appliances.





**Photoshop 7 now runs natively in Mac OS X. New features include the File Browser and the revamped Brush palette. The File Browser lets you scroll through image thumbnails, see image data, and perform batch processing.**

# Photoshop 7

DESIGN & GRAPHICS

Photoshop 6 addressed nearly all of the classic image editor's long-running problems; it was perhaps the most satisfying Photoshop version to date. But life and software must go on, and Adobe has released Photoshop 7. Is it worth the upgrade?

For serious graphic artists, the answer is: well, maybe. Yes, Photoshop is finally native for Mac OS X, which means increased stability and speed, especially on a multiprocessor G4. But printing may be a problem, as some legacy printers and RIPs still lack OS X drivers. And as of this writing, quite a few of your OS 9 filters and plug-ins don't work in OS X, either (such as Andromeda's collection and Alien Skin's Xenoflex, although the Eye Candy 4000 package does). Similarly, most color-calibration tools won't work under OS X—GretagMacbeth's Eye-One ([www.icolor.com](http://www.icolor.com)) is one that does. These issues aren't Adobe's fault, but they do powerfully affect Photoshop 7's usability in OS X. In the near term, sorry to say, you may well find yourself running Photoshop 7 in OS 9.

Whether you run it in Mac OS 9 or OS X, however, you will discover that although this upgrade is not as great a leap as version 6 was, Photoshop 7 certainly has some useful improvements. The major new features are File Browser,

the healing brush and patch tool, the beefed-up paint engine, and PDF-handling and -printing improvements.

The File Browser takes a good first swipe at what Photoshop has long needed: an integrated image browser, file catalogue, and batch-processing tool. You can view entire folders of images in large thumbnails (though not at full size), while seeing detailed info on file type, pixel ratio, color profile, EXIF info, and more. You can sort and rank images according to a variety of criteria, including rank number and keyword. The File Browser also features some batch-processing abilities, such as batch renaming and batch rotation. But it doesn't function as a full-blown catalogue; you can't use it to maintain a master catalogue of images spanning all your storage media.

The new paint engine provides control of many more brush parameters, such as tilt, jitter, texture, color dynamics, and shading. Managing the new brush capabilities is a more centralized task with the revamped, more comprehensive Brush palette. Creating custom brush presets is now easier—any image can act as a brush, appear in the Brush thumbnails, and have any brush attribute.

Photoshop 7 also supplies more types of natural-media brushes than before, and they

work more like the real things. With the watercolors brush presets, for example, overstrokes edge-blend into understrokes in a plausibly watercolorish way. But Photoshop 7 still has a way to go to match Procreate Painter's highly evolved natural-media effects. Conspicuously missing is any way to simulate a traditional ground (like canvas, watercolor paper, charcoal pad, and so on) as an underlayer and to have the paint strokes interact with the ground's texture. And brushstrokes sometimes redraw with painful slowness, depending on the brush size and other attributes you apply and your Mac's speed (our dual G4 1GHz lagged only a little).

If you publish PDFs or use them internally in your organization, you'll appreciate Photoshop 7's new security features. You can encrypt PDFs with 128-bit RC4 and require different passwords for various levels of security—viewing an image could require one password, printing it another. You can also edit the original Photoshop file's annotations in the PDF. Printing enhancements in the PicturePackage feature include preset standard photo sizes and multiple images on a single page—great for yearbook pictures or corporate ID badges.

The healing brush is our favorite new toy. It works like the familiar clone tool, but takes





**BLECH!**  
Give us back the time we spent testing this.



**YEAH, WHATEVER**  
Neither recommended nor rejected. Some might like this, but we didn't.



**SPIFFY**  
A solid offering. Overall a good investment.



**FREAKIN' AWESOME!**  
The most valuable products, the coolest gizmos.



Compatible with Mac OS X or later.



Compatible with Mac OS 9.x or earlier.

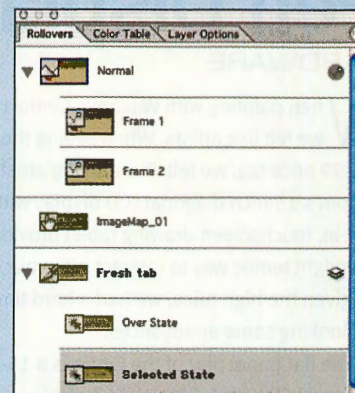
the additional step of modifying the color and tonal qualities of the cloned pixels so they blend naturally into the destination area. It's perfect for quick and seamless touch-ups—just the ticket for portrait photographers and assistant art directors. If the area you're repairing is large or requires multiple operations, select the area and use the patch tool; it has the same touch-up technology but works on selections instead. These kinds of simple but useful tools really do make your life easier.

But simplicity is not the dominant trend in Photoshop's development. The program's increasing complexity is outpacing—and compromising—the slowing advance of its functionality. When you're facing the menu bar with its submenus and subsubmenus, the toolbar with its subtools, the options bar (contextual menu) with its suboptions and minipalettes, the major multitabbed palettes, the individual palettes with their unique fly-out menus and submenus, the innumerable check boxes, the teeny-weeny widgets stashed around the edges of everything, and the custom folder structures for your own libraries of presets (tool, brush, color, and so forth), beginners will be hard-pressed to know just where to

## What's New in ImageReady

ImageReady, the Web-graphics editor that ships with Photoshop, is now at version 7. Here's what Adobe has added:

- A new Rollovers palette that shows all your slices, rollovers, image maps, and animations in one box.
- One-click rollovers from properly layered Photoshop images.
- Dithered transparency options for effects such as drop shadows.
- Easy color remapping.
- Independent optimization of text layers and vector art.
- Preview and save images in WBMP format for PDAs.



**ImageReady's new Rollovers palette shows each slice, rollover, map, and animation in detail.**

start. Pros will use Photoshop's Tool Presets to streamline the interface, and thank Adobe for adding the Save Workspace command—finally, we can save specific palette arrangements for different types of projects.

You'll notice that if you open any file in a color profile not the same as the one embedded in the file, Photoshop now asks you to save changes when you close it. This gets annoying when you're opening many files from different sources for a quick look—a task service bureaus and art directors do every day. Of course, the File Browser can

save you from some of this drudgery, but its thumbnail previews aren't big enough to show much detail.

Overall, Photoshop 7 is a conservative and reasonably solid release with a handful of welcome new features, such as the File Browser and healing brush, that you'll use every day. But despite the fact that Photoshop remains *the* essential image editor—and as longtime Photoshop partisans we never thought we'd say this—it's not a must-have upgrade. If you are a busy service bureau, professional photographer, or deadline-driven art director, you might do better staying with Mac OS 9.x and Photoshop 6 until other tools of the trade (namely QuarkXpress and some scanners and printers) make it to OS X.—Steve Anzovin



**With PicturePackage, you can print multiple images on a page and specify standard photograph sizes for output.**

COMPANY: Adobe Systems

CONTACT: www.adobe.com

PRICE: \$600 (street), \$149 upgrade

REQUIREMENTS: G3 or faster, Mac OS 9.1

or OS X 10.1.3 or later, 128MB of RAM

RECOMMENDED: Top-of-the-line

multiprocessor G4, 256MB of RAM,

large-screen monitor



### Freakin' Awesome!

GOOD NEWS: Mac OS X native.

Healing brush and patch tool for rapid

touchups. More powerful paint

engine. New file browser.

BAD NEWS: Drivers and plug-ins

still scarce for Mac OS X. Color-profile

issues. Ease of use compromised by

complexifying interface.





# Cintiq 15x Interactive Pen Display

## HARDWARE

When painting with Wacom's Cintiq 15x, we felt like artists. When seeing the \$1,899 price tag, we felt like starving artists. Wacom's 15-inch diagonal LCD display with a built-in, touchscreen drawing tablet provides a downright terrific way to interact with your art, but given the high price, we had a hard time overlooking some annoyances.

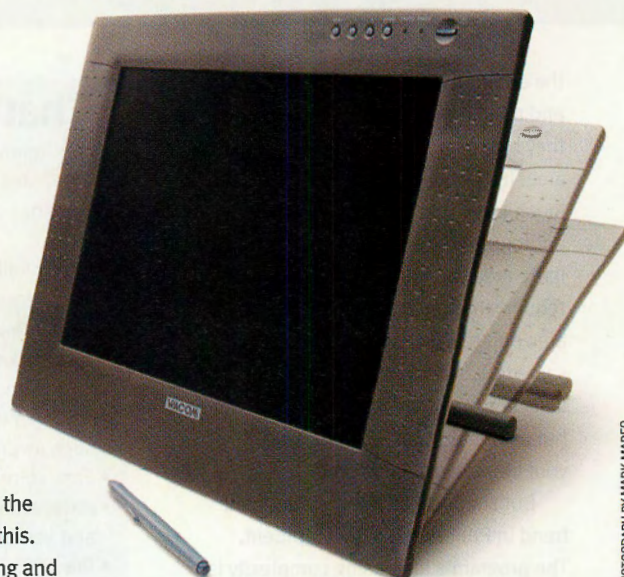
The flat-panel part of the Cintiq is a 15-inch diagonal LCD with 1,024-by-768-pixel resolution. The tablet is embedded in the LCD screen behind a protective layer of glass so you needn't worry about marring the LCD. Like Wacom's Graphire line, the Cintiq's pen provides 512 levels of pressure sensitivity, an eraser, and a dual switch on the side.

The basic installation is easy, although a little cumbersome. Just plug in the power cord and the monitor cable (either VGA or DVI), and the Cintiq LCD works in both Mac OS 9 and Mac OS X. Before you can use the pen and tablet features, however, you must plug in the USB cable and install the Wacom drivers. Cable management is a royal pain in the butt, and the limited rotation of the stand made us feel like the hunchback of Notre Dame (er,

Brisbane). Wacom's higher-end Cintiq 18sx solves these problems (see "Better SX," below, for more information on the Cintiq grandee). Although we had to download the Mac OS X drivers from the company's Web site, Wacom says it will include Mac OS X drivers on the bundled CD by the time you read this.

We spent some time calibrating and acclimating to the Cintiq. The pen was slightly imprecise: The onscreen cursor met the pen differently on the left and the right of the LCD. You can correct for this phenomenon, known as parallax, when you calibrate the device, but in use, navigating small boxes and menus was awkward at first. Also, when the Cintiq couldn't decipher the signal it received from our Mac's graphics card, we experienced a jarring vibration in the display's image. Pressing Cintiq's Auto Adjust (in the four-button control panel on the front of the monitor) resolved this.

As an LCD monitor, the Cintiq delivers a wide range of colors, sharp text, and no visible flickering. Wacom says you'll get a slightly crisper picture if you can use the Cintiq's DVI port with either a DVI-connected Mac or a DVI-to-ADC adapter. We plugged the Cintiq into our AGP Rage 128 Pro's DVI port to see for



PHOTOGRAPH BY MARK MADEO

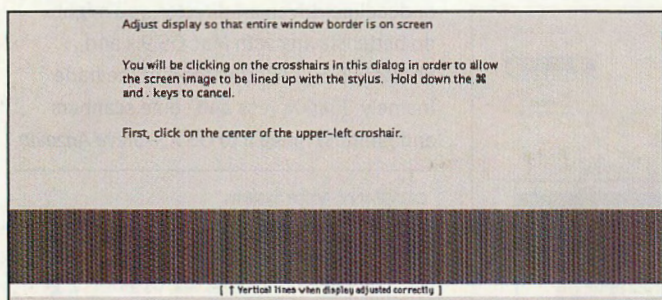
**The Cintiq is magnificent for general use, but serious artists may find the setup cumbersome and the pen tool imprecise.**

ourselves, and the picture did look a little better—be warned, though, that before you disconnect your old CRT display, you should make sure the Mac's video refresh rate is between 60Hz and 75Hz. We tried 85Hz, and the Cintiq couldn't read the signal.

As an interactive tablet, the Cintiq excels. We created a wide range of colors and line weights using Procreate's Painter in Mac OS 9 and Mac OS X. In Photoshop, we had a little trouble doing precise pixel work with pencils and the lasso tool, but painting was much easier, especially after we tweaked the stylus options in the Brush Dynamics dialog.

Ultimately, the Cintiq is ideal for scholastic use, for business use, and for most graphics use. Professional animators, fine artists, and video-production folk—who need pixel-perfect precision—may want to stick with Wacom's Intuous line or wait for the Cintiq 18sx.

—Narasu Rebbapragada



**Reduce parallax during calibration for better pen-point control.**

## Better SX

Wacom introduced the Cintiq 18sx too late for us to review here, but according to Wacom, it will address many of the concerns we had with the Cintiq 15x. It should be available by May 2002 for \$3,499.95.

**LARGER DIAGONAL DISPLAY** 18.1-inch diagonal to be exact.

**360-DEGREE ROTATING STAND** Removable for lap use.

**REDUCED PARALLAX** Pen is closer to the LCD surface than in the 15x.

**SINGLE CABLE** Avoids messy tangle of wires.

COMPANY: Wacom  
CONTACT: 800-922-6613 or  
360-896-9833, [www.wacom.com](http://www.wacom.com)  
PRICE: \$1,899 (SRP)  
REQUIREMENTS: Mac OS 8.6–9.x or 10.1  
or later, powered USB port, DVI or VGA port,  
CD-ROM



## Spiffy

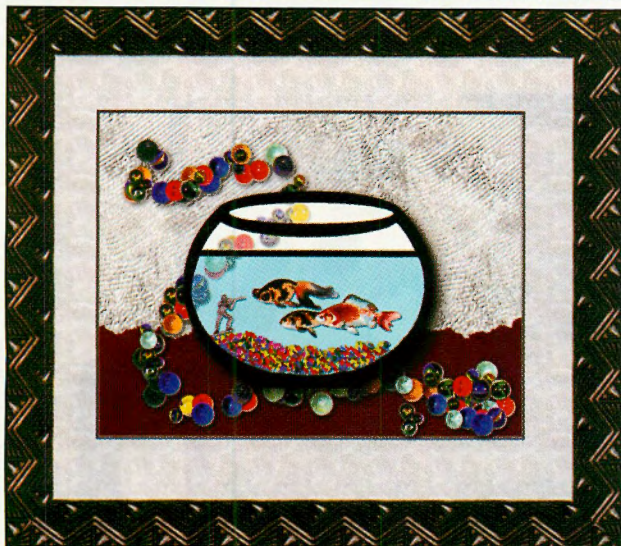
GOOD NEWS: Good LCD monitor.

Great illustration tool.

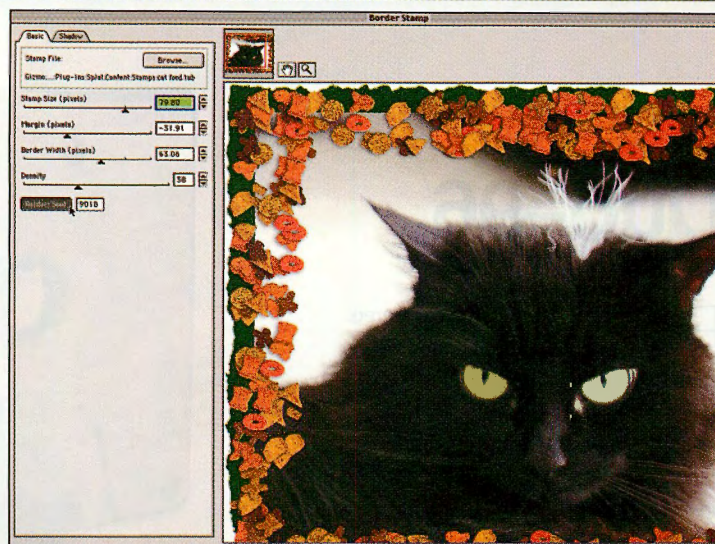
BAD NEWS: Messy cord management. Fussy calibration.







Create photo illustrations from Splat elements alone. We used Fish, Army Men, Broken Glass, and Marbles stamps to create our picture, and other effects for the frame and backdrop.

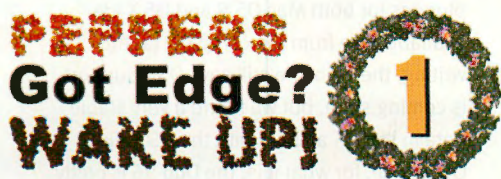


You can't dictate placement, so we had to keep clicking Random Seed for satisfactory kibble distribution (we used the Cat Food border stamp, a Bologna resurface for the green background, and a Torn Paper edge).

# Splat

DESIGN & GRAPHICS

We were so excited to get our hands on Splat that we installed it upon arrival, even though we were already up to our eyeballs in deadlines. After avoiding The Boss and playing dress-up with our photos for the next few days, our thoughts? Well, um...that Alien Skin logo on the box is pretty darn cool...



Web designers will appreciate Splat's Fill Stamp and Edges for unique text treatments and graphics.

Splat is a Photoshop plug-in you can use to add stamps (think *rubber stamps*, depicting esoterica such as lemons and green plastic army men), frames, and texture to photos. Though it's geared for folks who want to pretty up pics (or who are too cheap to buy real picture frames), anyone with high-resolution images (above 4 by 6 prints) may be disappointed with the small size of the stamps and frames. Our 4MB pics dwarfed many stamps, forcing us to scale down test images. Splat is much more suitable for low-resolution Web graphics.

The plug-in is divided into six sections, each with a specific function: Border Stamp frames

photos with stamps; Edges adds a graphic border; Fill Stamp fills a selection with stamps; Frame surrounds images with frames, mattes, and other oddities; Patchwork turns images into mosaics; and Resurface adds texture.

We had fun with Border Stamp and Fill Stamp. Image quality is top-notch, though the selection is somewhat obtuse—mostly household trinkets, food, kitschy items, and flowers. We loved the Cat Food, Little Rubber Aliens, Bell Peppers, and Plastic Monkeys stamps, but while it was fun filling and bordering our photos with the stuff (we test drove *every* stamp), we found 80 percent of them suited only for play (we'd kill for a stamp-making feature in a future release of Splat). We also wished we had more stamp control; we could vary the size (to a degree) and density, but couldn't command precise placement or choose a specific image within a stamp (for example, choosing only eight balls within the Billiard Balls stamp), things we can do with Human Software's PhotoSpray (\$99, [www.humansoftware.com](http://www.humansoftware.com)).

We liked Splat's Resurface feature, which includes many useful textures (such as paper mediums, leathers, rock surfaces, and furs), and some unconventional ones (Buttered Bread, Rice Crispy Treat, or Bologna, anyone?). It's awesome for adding texture to solid backgrounds and graphic art, but it's not the most realistic effect on photos. Edges is cool

when applied to text and shapes, but shrug-worthy for photos.

Patchwork is totally lame. Wow, we can turn our photo into a Lite-Brite style pegboard, ASCII image, tile mosaic, or cross-stitching—all with embarrassingly low quality. Blech! The Frame feature is a mixed bag. The wood frames are beautiful, but what, no metal ones? The graphical frames are uninspiring, though the novelty choices are fun. We wish we could customize the tint of the mattes and frames to better complement our work.

Though we eagerly anticipated Splat's release, our eagerness gave way to a big yawn after a few days. While the package has its bright spots, it also has its lemons (and tiny ones at that).—Kris Fong

COMPANY: Alien Skin Software  
CONTACT: 888-921-7546, [www.alienskin.com](http://www.alienskin.com)  
PRICE: \$99 (SRP), \$69 sidegrade from Eye Candy or Xenoflex  
REQUIREMENTS: Power Mac, Mac OS 8.6-9.x or 10.1 or later, 32MB of RAM, 300MB of free hard disk space, compatible host app (Photoshop 5 or later or Fireworks 3 or later)



## Yeah, whatever

GOOD NEWS: Oodles of fun initially. Cool photo stamps. Great for photo illustrations.  
BAD NEWS: Stamps ineffective on large images. Limited command or customization of stamp art. Novelty wears off quickly.





# Duo-96

## HARDWARE

Playing MP3s through the car stereo: We've dreamed about it, and we've drooled over it (*Droolworthy*, Jul/01, p18). Digisette, as its name suggests, makes cassette-shaped MP3 players that bring the daily commute into the realm of our digital lifestyle. The Duo-96 isn't the perfect solution, but it's pretty freakin' cool—and more graceful than other mergers of MP3 player and car stereo we've seen (namely cassette adapters and wireless transmitters). Turn on the Duo, stick it in a cassette player, and that's it—no wires or hardware to worry about. When you're pounding the pavement, use the Duo as a regular MP3 player—just plug in the included earbuds and rock on.

This baby's made for car-bound commuters (but not for travelers). Its 96MB memory holds enough music for repeat-free listening on any nonlethal commute (98 minutes). Plus, the Duo comes fully accessorized. You get a 1.2-volt rechargeable battery with two chargers—one for the car and one for an AC outlet at home—both of which can power the unit and charge the battery simultaneously (the manual warns that playing the Duo-96 through a car stereo while the unit is plugged into the DC adapter may compromise sound quality, but ours sounded fine). The Duo also comes with earbuds that fit better than the iPod's and sound almost as good, a USB cable for transferring music, and a wraparound carrying case with a belt clip. The power-supply attachment is small enough so that with some tape players—like the slot loader

It ain't cheap, but it's easy; these four buttons control the interface-less Digisette.



PHOTOGRAPH BY MARK MADEO

**Digisette's Duo-96 plays MP3s through headphones or a tape deck. If this is convergence, bring it on!**

in many cars—you can leave it attached (and thus power the unit *and* charge the battery) while the cassette is playing.

What the Duo kit lacks is memory: The onboard 96MB holds only about 35 songs (short, 3-minute ones) encoded at 128 Kbps; you can upgrade the memory via a MultiMedia Card slot on the Duo, but these cards aren't particularly big or cheap (64MB for \$54.99; SanDisk Corporation, [www.sandisk.com](http://www.sandisk.com)). Another extra you can buy is the tethered LCD remote control (\$29), which doesn't work while the Duo's in a tape deck, but displays handy information such as battery life and song titles. Speaking of battery life, ours lasted for a full 6 hours of continuous play; recharging the battery took about 2 hours.

In terms of frills, the Duo is a Spartan little device. Onboard controls include the perfunctory stop and go buttons, fast-forward, rewind, and volume; you press the go button during play to cycle through the EQ presets (Flat, Rock, Jazz, Dance, Latin), but there's no onscreen display, so you'll have to

trust your ear as to which EQ mode is active. A tricky little slider on top offers On, Off, and Hold. A final switch lets you set the direction in which the cassette's spindles would spin if the Duo were an actual cassette tape (which is unnecessary on modern tape decks).

We have to chide Digisette for teasing us with such a droolworthy gadget and taking so long to release the Mac drivers. At last, iTunes plug-ins for both Mac OS 9 and OS X are available free from the company (at this writing, the Web site still says OS X support is coming soon, but we found a very stable beta in the SIT archive with the OS 9 file). Otherwise, for what it is, the Duo-96 is pretty near perfect. It's no iPod, but let's see you stick an iPod *directly* into your car stereo.

In terms of convenience alone, the Duo-96 rocks, though we'll be waiting eagerly for larger-capacity models. If you want the slickest way to cram 100 minutes of MP3s into your car stereo, look no further.

—Niko Coucouvanis

## Note to Self...

Digisette also makes a Duo with a handy integrated voice recorder for those times when inspiration strikes and you can't drop everything to jot down your thoughts. The 64MB Duo-64 is tape-deck friendly and MMC expandable, like the Duo-96, and like your faithful dog, it'll listen to all your harebrained ideas.

COMPANY: Digisette  
CONTACT: 973-455-7084,  
[www.digisette.com](http://www.digisette.com)  
PRICE: \$229 (SRP)  
REQUIREMENTS: Power Mac with USB  
port, Mac OS 8.6 or later, iTunes

## Spiffy

GOOD NEWS: Brilliant concept.  
Good execution. Includes everything  
you need to use it.  
BAD NEWS: Slow data transfer.  
Low capacity. Not many frills.







Flash just keeps getting better: Note the new Property Inspector, text options, and massive stack of collapsible panels on the right.

# Flash MX

MULTIMEDIA

As longtime Flash users, we've seen the program evolve from FutureSplash—basically the vector equivalent of animated GIFs, which were pretty cool back then (circa 1996)—into a full-fledged application-development tool. Flash 5 was no slouch, and MX brings still more powerful ActionScript tools with better onboard help; predefined interface components (including check boxes, buttons, and scrollbars); and lo, a Properties Inspector (à la Dreamweaver); plus, it looks (and runs) like a dream in Mac OS X.

First, a note to veteran users: Don't fret—the Flash interface you love has only changed for the better. New folders in the timeline let you group layers for better organization in heavily layered projects, and the multitudes of tool-controlling panels now stack and collapse, so they're easier to manage than the old multitab panels of version 5. What's new is the context-sensitive Properties Inspector—and it's exactly what Flash needed. Now you can numerically fine-tune just about anything using the Inspector. Just select and activate any tool or element that has adjustable properties or parameters—Symbols, Frames, Objects, Groups, and tools, for example—and the Inspector assumes a context-specific interface.

If you'd rather do your pixel-level tweaking the old-fashioned way—with the mouse and cursor—Flash MX has refined that option, too. Flip the new Snap To Pixels switch (in the View menu), crank the view

magnification up to 400 percent, and you'll see a pixel grid that you can use to snap your symbols and objects precisely where you want them onstage. This works even when you're using the new Free Transform tool, which combines the old Skew, Rotate, Distort, and Scale tools into one glorious widget.

Flash 5's Text Options panels were great, but MX takes it to the next level. The Properties Inspector handles all text tweaking, now including support for vertical text and double-byte fonts, such as Korean and Chinese.

Lest you think Flash MX is only for professional Web developers, the emphasis on *Web apps* (buzzwordian for data-collecting forms) has "small business (we laid off the Web guy)" written all over it. Predefined components, such as text-entry fields and pull-down selection menus, let you drag and drop your way to a full-featured e-store. And that ease of use extends to the ActionScript coding, which Flash can still do for you, via the Actions panel's point-and-click Normal Mode; even in Expert mode, the ActionScript Editor has code hints, a debugger, a syntax checker,

## Spark It Up!

Flash got QuickTime friendly in version 5, but MX takes it a step further. Whereas before you could reference and layer tracks of interactivity above QuickTime movies, MX incorporates Sorenson's Spark video codec, so you can embed video directly in the SWF file—no separate MOV file required.

autoformatting, and even find-and-replace functions for changing recurrent bits of code. If you get stuck, the Reference Panel explains every ActionScript element.

Our quibbles with Flash are relatively minor: Ignorance of Photoshop Layers and Illustrator files remains our major beef, and the new Accessibility options (for users with disabilities) are a nice gesture, but you can't preview the output, and the software required for playback is currently Windows only.

Powerful as it is, Flash MX is only the beginning; Macromedia is working on integrating Flash with a new Macromedia communication server this year, which will allow instant-messaging and video-chat capabilities in Flash. We can hardly wait.

—Niko Coucouvanis

COMPANY: Macromedia  
CONTACT: 800-457-1774 or 415-252-2000,  
www.macromedia.com  
PRICE: \$499\* (SRP), \$199 (upgrade)  
REQUIREMENTS: Power Mac, Mac OS 9.1 or  
10.1 or later, 64MB of RAM  
\* A little birdie told us Macromedia is rolling the whole  
farm (MX versions of Flash, Dreamweaver, Fireworks,  
FreeHand, and ColdFusion) into Macromedia Studio MX  
(\$799 ESP), which it expects to ship at the end of May.

## Freakin' Awesome

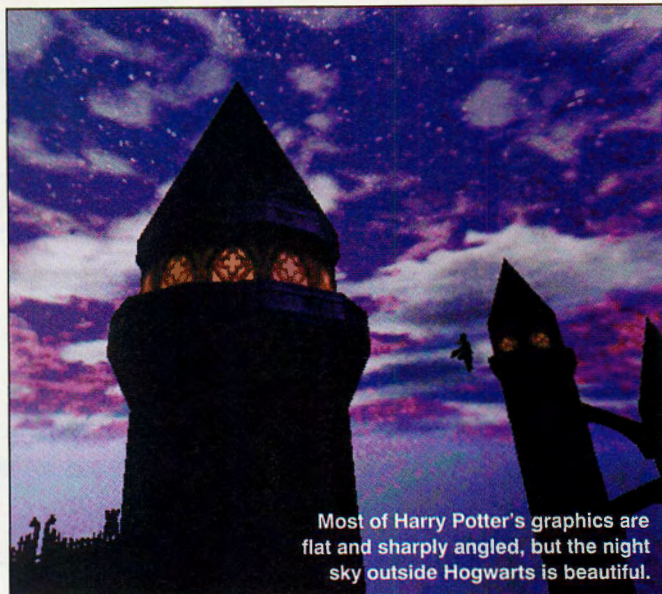
GOOD NEWS: Streamlined  
interface. Dreamweaver-style  
Properties Inspector! Massively  
powerful scripting language and tools.  
BAD NEWS: \$100 more than version  
5 was last year. Doesn't import  
Illustrator files or layered Photoshop files.







Collecting wizard cards throughout the game enhances your wizardly powers.



Most of Harry Potter's graphics are flat and sharply angled, but the night sky outside Hogwarts is beautiful.

# Harry Potter and the Sorcerer's Stone

FUN & GAMES

We liked the book and the movie, but Aspyr's Harry Potter and the Sorcerer's Stone struggled to entertain us on its own merits. It is great for kids and casual gamers, but its uninspired gameplay, awkward controls, and ho-hum graphics make it a snore for anyone else.

The story line of the Harry Potter game rings true to the original tale. A series of storybook-style illustrations explains how Harry Potter suffers through his early years in the Muggle (ordinary human) world until he gets an invitation to the Hogwarts School of Witchcraft and Wizardry. The game begins at Hogwarts, takes Harry through his wizardly lessons, and slowly unveils an evil wizard's plot to steal the magical Sorcerer's Stone. Harry must thwart the evil Voldemort's plot, fighting other foes along the way.

The game consists of Harry walking, running, and jumping his way around the Hogwarts castle and grounds. He learns spells (such as Flipendo, Lugis, and Alohomora), which you practice by tracing your mouse over the onscreen paths of professors' wands. Potter then casts these spells to open secret doors, move obstacles, create magic staircases, and fight villains. Throughout the game, you collect as many challenge stars, Bertie Bott's Every Flavor Beans, and Wizard Cards as you can find, but

in the end it's not crucial that you locate every single one. The challenges include jumps over a deep abyss, avoiding man-biting plants, fights with a poltergeist, getting past a snarling three-headed dog, and a troll's harrowing chase. (We won't reveal them all here.) Two areas in particular offer notable excitement. One is the last battle with Voldemort. The second is Quidditch, the wizard world's version of Monday Night Football.

Unfortunately, that's where the excitement might end for some. The gameplay itself is repetitive (how many times can you listen to Harry say "Flipendo!" without going nuts?), and the controls are oversimplified. Your primary means of motion are the arrow keys, along with one command for speeding up Harry's movement, another for slowing it down, a third for casting spells, and a fourth for jumping. For a game based on the Unreal Tournament engine, we expected at least a separate strafe command for sidestepping. Also annoying were the occasional bugs that caused the screen to go black mysteriously, and the game really could have benefited from a quick-save key—the designated save points are too infrequent.

The graphics are pretty flat, but they do get more interesting as the game progresses. Some levels, like Hogwarts' gardens and

cavernous underbelly, are beautiful, but the castle interior, while true to the movie, gets a little tedious. The game is delightfully interspersed with cut scenes, where book characters like Hermione Granger and Ron Weasley appear with great voice-overs. And the well-executed graphics and audio in the cut scenes move smoothly even on our modest 400MHz G4 with 192MB of RAM, a rig that's hardly adequate for most new games.

Even though we finished the game pretty effortlessly and its replay value is virtually nil, we liked Harry Potter and the Sorcerer's Stone because of its engaging story and endearing characters. If you have kids, are a kid, or just really like Harry Potter, you'll enjoy this game. If not, save your lunch money for a tougher challenge.

—Narasu Rebbapragada

COMPANY: Aspyr  
CONTACT: 512-708-8100, [www.aspyr.com](http://www.aspyr.com)  
PRICE: \$29.95 (SRP)  
REQUIREMENTS: 300MHz G3, Mac OS 8.6 or later, 96MB of RAM, 530MB of free hard disk space, ATI Rage 128 or better graphics card



## Spiffy

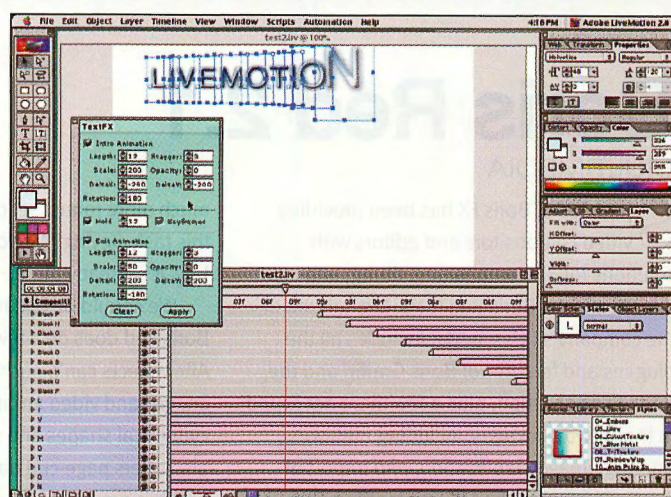
GOOD NEWS: Engaging story line. Quidditch rocks. Great for kids.  
BAD NEWS: Repetitive, simplistic gameplay. So-so graphics.







Look familiar? LiveMotion does Adobe's standard, palette-based interface proud in Mac OS 9 and Mac OS X.



One advantage LiveMotion has over Flash is TextFX, a collection of prescribed text effects.

# LiveMotion 2.0

MULTIMEDIA

The first version of LiveMotion may have disappointed some Web developers, even though it offered many tools for quickly creating stunning animations. LiveMotion won't defrock Macromedia's Flash (see *Reviews*, p51) anytime soon, but it automates some tasks that remain tedious in Flash (such as importing layered documents and a number of preprogrammed text and graphic effects). This makes LiveMotion a handy complement (or cheaper alternative, for beginners) to Flash. LiveMotion's new tricks include powerful script automation and support for Flash's ActionScript; integration with other Adobe products; improved timeline management; new keyboard shortcuts; and improved file-optimization tools.

LiveMotion's new scripting capabilities offer something for both advanced and beginning users. The new Live Tabs feature is the quickest and easiest way to add effects or behaviors to text or objects. We put a spin on some text by converting a word into a set of separate objects using the Convert Into Objects command and selecting Live Tabs > TextFX from the Automation menu. After creating the desired effect, you can adjust rotation, scaling, length, and more using the TextFX palette. The Live Tabs feature unfortunately comes with only nine scripts (including Slide Show Maker, Star Tool, and others pertaining to color, alignment, grid, and so on), but soon more of these will be available at the new Adobe Xchange Web site ([www.adobexchange.com](http://www.adobexchange.com)).

With a little help from the manual, anyone can use LiveMotion's new Script Editor. Once you select an object and open the Script Editor, the editor's drop-down menu lists the available event handlers. Left of the Script Editor window is a list of relevant methods and properties. As you select these events and properties, the Syntax Helper displays a description at the bottom of the Script Editor window. Once you find the one you want to use, simply double-click it, and the script appears in the main window (where you can modify it manually).

LiveMotion 2.0 plays well with other Adobe products. You can easily drag and drop layered Photoshop and Illustrator files into LiveMotion, and quickly convert them to single objects, groups, or sequences. Flash still makes you import layers individually. LiveMotion makes adding dynamic data to a Web page in Adobe GoLive a snap. Simply set up your source file with dynamic elements in LiveMotion and place the Smart Object on the GoLive page, where you can still make changes via the Variable Settings dialog. Also, you can now import After Effects animations saved in Adobe Motion Exchange (AMX) format into LiveMotion, and add interactivity for stunning results. One annoyance is the lack of complete Flash integration; though you can add LiveMotion files to Flash projects, you can't import Flash files into LiveMotion.

LiveMotion 2.0 also brings improved optimization features and timeline

management. The easy-to-use Per-Object Compression and Preview Export Compression options give you full control over final image size and quality. Selecting Preview Export Compression from the View menu shows whether your selected object will export as vector or bitmap, and displays the final file size at the very bottom. As you select an individual object and use the Export Palette to control image quality, the results appear immediately onscreen. LiveMotion's timeline management is now similar to After Effects', and new keyboard shortcuts really save time spent managing timeline content.

Today's Web developers have to produce results quickly, and LiveMotion speeds you through certain tasks that require many steps in Flash. If we had to pick only one, it'd still be Flash, but on its own merits, LiveMotion is a worthy addition to any smart Web developer's software library.

—Christine Saucier

COMPANY: Adobe Systems  
CONTACT: 800-833-6687 or 408-536-6000,  
[www.adobe.com](http://www.adobe.com)  
PRICE: \$399 (SRP), \$99 (upgrade)  
REQUIREMENTS: G3, Mac OS 9.1 or 10.1 or  
later, 64MB of RAM (128MB recommended)

## Spiffy

GOOD NEWS: Powerful new scripting tools. Integration with other Adobe products. Enhanced compression tools.  
BAD NEWS: Only nine automation scripts included. Can't import Flash files.





# Boris Red 2.1

## MULTIMEDIA

Since 1995, Boris FX has been providing video compositors and editors with solutions for 3D compositing, titling, and special effects. Boris Red is the big kahuna of the company's titles, and it includes all the plug-ins and features of Boris Graffiti and the Boris FX application, plus a few more not found in those two packages, including motion tracking, image stabilization, and import of Adobe Photoshop and Illustrator files. But we have to wonder what the big deal is, since you'll find a lot of Boris Red's functionality already built into the required host application.

Essentially, Boris Red is a plug-in for video programs such as After Effects and Final Cut Pro. The Boris interface is one of the most convoluted and unintuitive we've seen in any compositing program. You must constantly jump back and forth between different windows, and the program requires that you learn new paradigms such as face tracks and containers.

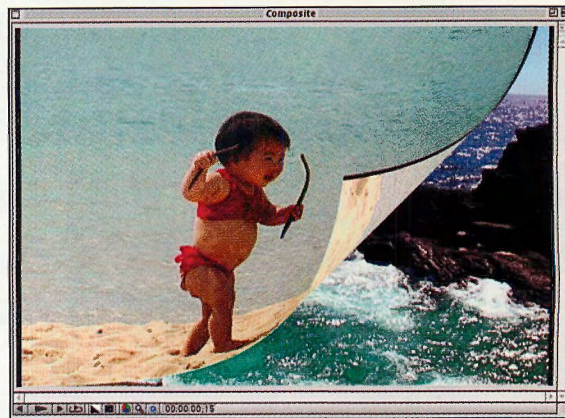
Ugly interface aside, we found a lot of redundancy between Boris Red and the production plug-ins that came with After Effects. For example, 3D compositing is one of Boris Red's big features, but After Effects has a

much more robust set of tools for this task. Keying? Motion tracking? Hey, it's already there.

We should be fair, however: Boris Red does do a few things After Effects can't, such as wrap images and video around cylindrical shapes and spheres. It also offers page-curl transition, which is actually quite easy to master. If you noted a hint of sarcasm in our writerly voice, you're very perceptive. These effects were shamed into retirement back in the 1980s.

Boris Red does have some good features. The 3D-text tools and controls are very rich and very useful. Boris Red has parameters for mapping a still image, video, colors, gradients, and patterns on the surface of 3D extruded text. You have control over the extrusion length and the bevel shape. You can assign material properties such as plastic and metal to text. You can also import and extrude EPS files so objects have volume in 3D space. Now there's something you can't do in After Effects.

This unique feature isn't enough to warrant the \$1,995 price tag, though. We recommend



**Boris has mastered the page curl, an effect we're pretty sure is now banned in the United States—at least the contiguous ones.**

looking into Boris Graffiti, a \$495 solution for all the unique text effects you can't create in video-compositing or -editing applications. Unfortunately, you'll still have to deal with the unwieldy Boris interface when you purchase any Boris product.—*Andrew Tokuda*

COMPANY: Boris FX

CONTACT: 617-451-9900, [www.borissfx.com](http://www.borissfx.com)

PRICE: \$1,995

REQUIREMENTS: Power Mac, Mac OS 8.6–9.x, 128MB of RAM

### Yeah, whatever

GOOD NEWS: Rich 3D-text features. Unique 3D extrusion.  
BAD NEWS: Poor interface. Redundant effects.



# VeloCD

## HARDWARE

We thoroughly dug TDK's veloCD 16X burner last year (*Reviews*, Oct./01, p45), and this time out, the veloCD is packing more than just a 50 percent boost in burn speed. This year's model clocks in at 24X, with the same 10X rewrite and 40X read speeds as the

previous version's—plus it answers our lone complaint with last year's model by dropping the price \$100.

Otherwise, the veloCD hasn't changed: same cool casing and stem-to-stem blue status light, same convenient volume control and headphone jack on the front, same rock-solid performance, same software bundle (MusicMatch Jukebox and Toast Lite)—which still isn't OS X native. Unfortunately, iTunes

doesn't recognize the veloCD, but we burned discs from the Mac OS X Finder all day long with blazing speed (about 4 minutes to fill a 700MB CD) and nary an error.

Complaints about this drive are hard to come by, but we can nitpick: The round, serial-style connection that attaches the power cord to the drive temporarily stymied our plug-and-play fun (we're always worried about misaligning the pins); even though it's not advertised as a

portable model, the veloCD is a little bulky.

If you're looking for the straight-up fastest CD-RW drive (that is, not a superfast, supercool-looking external), TDK also offers an internal veloCD, which writes, rewrites, and reads at 40X, 12X, and 48X, respectively. Yes, 40X write speed, and at \$149, it's half the price of the external model.

We love it when a good thing gets better and cheaper, so we're naturally smitten with the 24X/10X/40X veloCD.—*Niko Coucouvanis*



**Same retro futuristic look, better performance under the hood, and a smaller price tag.**

COMPANY: TDK

CONTACT: 800-835-8326 or 516-535-2600, [www.tdk.com](http://www.tdk.com)

PRICE: \$315.99 (SRP), \$275 (street)

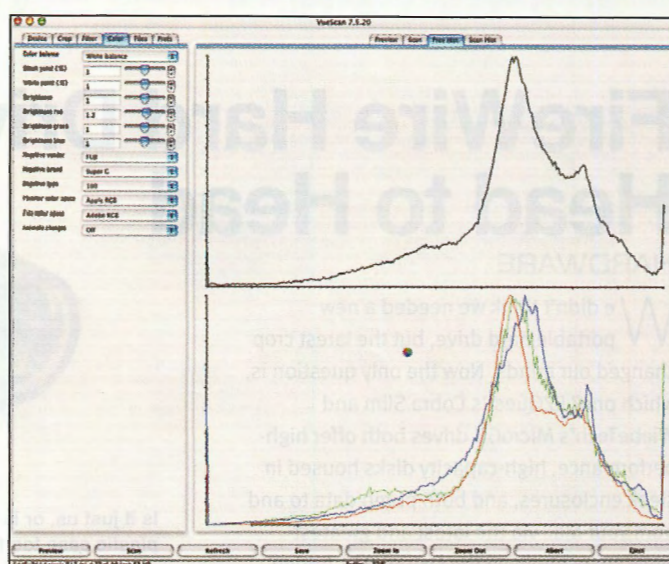
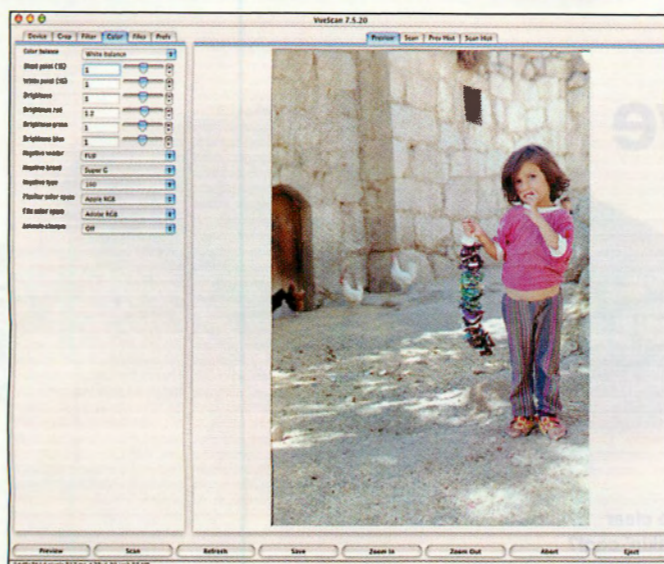
REQUIREMENTS: G3 or faster Mac, 128MB of RAM, Mac OS 9.0 or later, native FireWire port

### Freakin' Awesome

GOOD NEWS: Rips *Dark Side of the Moon* in 4 minutes flat. Groovy case and blue status light.  
BAD NEWS: No iTunes support.







The histogram (right) doesn't lie: VueScan shows you exactly what effect your adjustments will have on the final image, and if you know what you're doing, the result can be fabulous.

# VueScan 7.5.20

## UTILITIES

We generally shy away from reviewing shareware, but Ed Hamrick's VueScan is a pretty remarkable program, not least because he seemingly works around the clock to update it—we're talking ten updates in the two weeks we've been reviewing the program. VueScan isn't flashy, and it isn't an image-editing program; it's a scanner driver, and you use it to replace the free drivers that ship with most scanners—or, if you're lucky, to get your scanner finally working in Mac OS X.

VueScan's ability to integrate scanner and Mac harmoniously is remarkable. The software is compatible with over 50 scanner models (listed at [www.hamrick.com/vuescan/vuescan.htm](http://www.hamrick.com/vuescan/vuescan.htm))—film and flatbed, SCSI, FireWire, and USB. It runs natively in OS X, even with scanners that don't offer OS X drivers. We used it with an Acer ScanWit 2740s film scanner that we couldn't successfully run on an OS X machine even with the scanner's packaged software (MiraFoto).

VueScan communicates on a low level, reading information directly from the scanner's charge-coupled device (CCD), which captures the image and then stores the captured information in a memory buffer. The program's default settings are generally appropriate, but you have the option of tweaking just about every action your scanner performs.

You can improve image quality (and reduce image noise) by scanning each pixel more than once and averaging the results. Some scanners are capable of single-pass multiscanning, which involves reading data from each pixel multiple times before advancing the scan head. Most scanners that don't support this feature will allow VueScan to perform multipass multiscanning, scanning the image multiple times and averaging the pixel values. The process is time-consuming, but our test images came out relatively free of noise.

Once the raw CCD data is in the memory buffer, VueScan's processing algorithms (including dust removal, grain reduction, color restoration, and sharpness) go to work. You can tweak these settings after the initial image preview, and watch the results appear in real time in the display image.

VueScan has impressive color-processing accuracy. It specifically addresses the challenges of color-correcting scans from negatives by including profiles for over 200 different types of film. VueScan also color-corrects the raw data based on your particular scanner, providing a wide range of manual adjustments. While adjusting color, you can switch back and forth between the preview display and a histogram view and even view histogram changes in real time. You can tweak the color until it's just right, or scan the widest possible range. The latter produces a flat-looking image but gives you the most

image data if you'd rather tweak the file in Photoshop.

A particularly powerful feature of the program is its ability to save the raw data to a file, so you'll never have to rescan the original. If you aren't happy with your scan's color balance, you can open the raw file in VueScan, and the program behaves as if you're scanning the original again, allowing you to process the data as you see fit.

To get the most out of VueScan, you'll need to have a keen interest in imaging and the patience for a lot of experimenting. The user guide is complete, but would be a lot easier to follow if it incorporated screen shots. That said, this is an extremely powerful piece of software for \$40. After some initial fiddling with VueScan's settings, we were very impressed with the quality of our scans.

—Michael Shapiro

COMPANY: Hamrick Software

CONTACT: [www.hamrick.com](http://www.hamrick.com)

PRICE: \$40

REQUIREMENTS: Power Mac, Mac OS 8.6 or later, 150MB of RAM (more for larger images), supported scanner

### Freakin' Awesome

GOOD NEWS: Great power for the money. Expands the options for scanning in OS X.

BAD NEWS: Complex program would benefit from an illustrated user guide.





# FireWire Hard Drive Head to Head

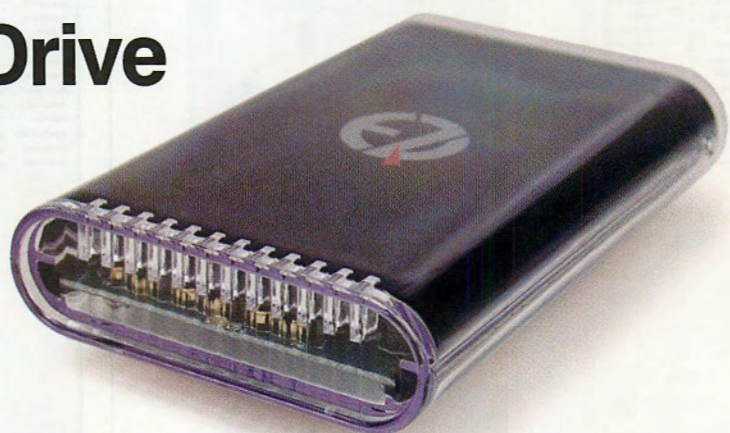
## HARDWARE

We didn't think we needed a new portable hard drive, but the latest crop changed our minds. Now the only question is, which one? EZQuest's Cobra Slim and WiebeTech's MicroGB drives both offer high-performance, high-capacity disks housed in sleek enclosures, and both pump data to and from your Mac via the latest and greatest FireWire technology: the Oxford 911 bridge. Both drives include all the necessary cables and optional power adapters (they can also run off the FireWire connection), as well as drivers, which you probably won't need, as both are plug-and-play-compliant in Mac OS 9.x and OS X.

Under their stylish exteriors, these drives have some unique and notable features. First, they're both available in capacities ranging from 10GB to 60GB. The MicroGB gets a point here for its user upgradability (WiebeTech



Anodized aluminum has charms of its own.



PHOTOGRAPH BY W. B. JONES

Is it just us, or is the clear plastic case too freakin' cool?

also sells just the enclosure for \$159.95), whereas the Cobra has an unsightly "Warranty Void If Removed" sticker on the back to prevent you from changing the innards (boo).

Another potential advantage of the MicroGB is the USB 2.0 port on its back, although our informal speed tests (see "By the Numbers," below) show that USB 2.0, while it smokes the older USB 1.1, isn't any faster than FireWire. Also, USB doesn't supply enough power to run the drive, so you're stuck using the AC adapter. No thanks.

Our informal speed tests also gave the FireWire-connected MicroGB a slight edge over the Cobra. However, in particular functions, such as reading, writing, and duplicating data, sometimes the Cobra performed better, and in other cases the MicroGB moved ahead. Both are faster across the board than the reference iPod.

Though the speed difference is negligible, the MicroGB also gives you the option of installing your own high-performance drive and/or upgrading to a bigger, faster drive in the future.

The Cobra is certainly fast and

capacious enough, but its unique extras all lie in the style department: A cool blue LED on the front lights up when the drive is busy, and the clear plastic body lets you look through the underside to the circuit board for some geek-chic eye-candy.

Either of these drives is quite capable, so your choice depends on your needs. If you want USB 2.0 or warranty-safe upgradability (or if you prefer the sexy aluminum casing) the MicroGB is the only way to go. If you just want a fast and spacious bus-powered portable drive, whichever one fits your aesthetic will serve you well. For our dollar, USB 2.0 is superfluous, as is that "Warranty Void" sticker, so we declare this match a draw. —Niko Coucouvanis

## By the Numbers (transfer time in seconds)

	COBRA SLIM (OS X/OS 9)	MICROGB FIREWIRE (OS X/OS 9)	MICROGB USB 2.0 (OS X ONLY)	iPOD (OS X/OS 9)
Duplicate 210MB file	32/29	27/28	37	69/48
Read 210MB file	13/26	13/24	17	21/35
Write 210MB file	17/35	30/32	23	50/40
Duplicate 210MB folder full of files	44/33	34/34	45	90/57
Read 210MB folder full of files	17/33	18/29	24	28/38
Write 210MB folder full of files	35/37	37/41	30	55/47

\*Smaller numbers are better; this is real-world data, so your mileage will vary.

### COBRA SLIM 60GB

COMPANY: EZQuest  
CONTACT: 714-694-0031, [www.ezq.com](http://www.ezq.com)  
PRICE: \$629 (SRP)  
REQUIREMENTS: Any Mac with a FireWire port, Mac OS 8.6 or later



### Freakin' Awesome

GOOD NEWS: Stylish clear plastic case. Fast.  
BAD NEWS: "Warranty Void If Removed" sticker. Way not cheap.



### MICROGB 40GB

COMPANY: WiebeTech  
CONTACT: 316-744-8722, [www.wiebetech.com](http://www.wiebetech.com)  
PRICE: \$399.95 (SRP)  
REQUIREMENTS: Any Mac with a FireWire port, Mac OS 8.6 or later



### Freakin' Awesome

GOOD NEWS: User configurable. Dual buses. Suave looks. Fast.  
BAD NEWS: Not cheap.



PHOTOGRAPH BY MARK MADEO



# OrangeUSB 2.0 Hi-Speed PCI

## HARDWARE

As cool as USB is with its associated buzzwords like *hot-pluggability* and *plug-and-play* and its ability to support up to 127 devices simultaneously, it has one undeniable flaw: With a top transfer speed of 12 Mbps, it's slower than your dead granny. The solution? Evolution. USB 2.0, capable of 480 Mbps, is a full 40 times faster than the USB 1.1 bus that graces all currently shipping Macs. With Apple still not commenting on whether it plans to support USB 2.0, Orange Micro's OrangeUSB adapter is your ticket to USB 2.0 and its well-hyped speeds—provided you use Mac OS X; Orange Micro hasn't yet delivered Mac OS 9 drivers, nor has the company announced any definite plans to do so. The card does work in Mac OS 8.6–9.x, but only at the slow USB 1.1 rate of 12 Mbps.

To put USB 2.0's 480-Mbps speed in perspective, figure that there are 8 bits in a byte, which breaks it down to 60 MBps (MB, like the 128MB of RAM that came in your iBook). That's 80Mb faster than FireWire, which tops out at 400 Mbps (50 MBps) per second. Keep in mind that those are theoretical maximums: Like any human, computers don't achieve their full theoretical **potential**. For example, your ATA/66 internal hard drive is theoretically capable of pumping data at 66 MBps, but in the real world, you might hit that sporadically in a surge of speed (known as the peak or burst rate), while the sustained transfer rate generally tops out at 30 MBps (on an exceptionally good day). If you've heard the numbers but never clocked your hard drive in action, bust out the stopwatch—you're in for a surprise. Because the OrangePCI is the only way to get USB 2.0 on an OS X–running Mac, we used this card to test a dual-bus (FireWire and USB 2.0) external hard drive; see "By the Numbers" on p56 for the results of our real-world speed tests (in the end, FireWire proved to be slightly faster overall).

Suffice it to say that we're not terribly impressed with USB 2.0; besides not living up to its overhyped potential, it falls short of FireWire in at least one other respect—bus

power. The FireWire bus carries enough voltage to power some external hard drives, whereas USB can power keyboards, mice, and some CompactFlash readers, but not much more without help from an external AC adapter. Granted, USB supports up to 127 devices compared to FireWire's 63, but who's got that much stuff to plug into their Mac?

Whatever you think of USB 2.0, the OrangeUSB card is a well-made piece of hardware. The three onboard USB controllers provide three USB buses to accommodate your devices (up to 378 of 'em!). Just don't expect USB 2.0 speed on more than 127 devices—only one of the card's controllers is pure USB 2.0; the other two are of the slower USB 1.1 variety. Thus the card is backward-compatible with your old USB gear. Plus, it's smart enough so that you can plug devices of either flavor (USB 1.1 or 2.0) into any of the five ports, and the card automatically taps each one into the appropriate USB controller.

As far as we're concerned, USB 2.0 is a relatively irrelevant technology, but if you've gotta have it, you've gotta have it, and the OrangeUSB 2.0 does it up right—in OS X anyway.—*Niko Coucouvanis*

COMPANY: Orange Micro  
CONTACT: 714-779-2772,  
[www.orangemicro.com](http://www.orangemicro.com)

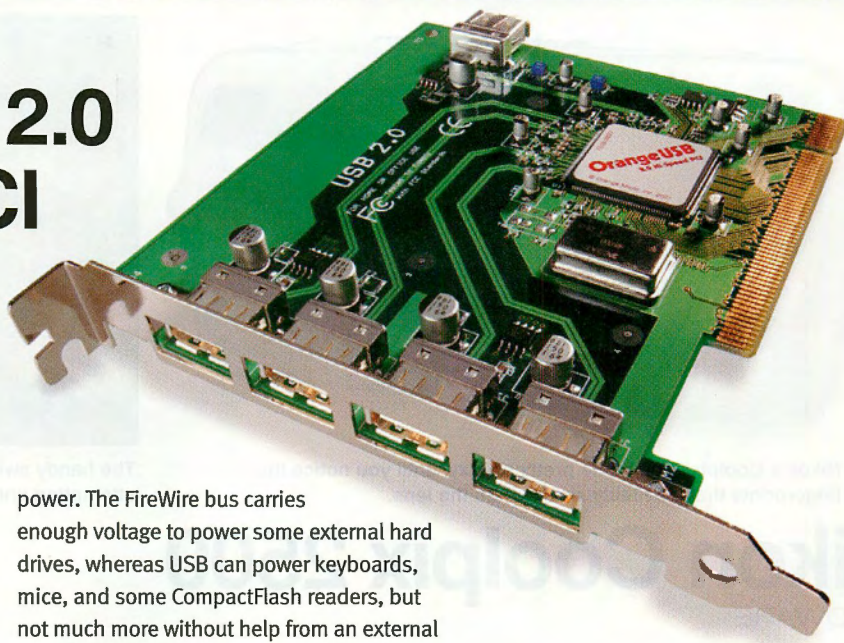
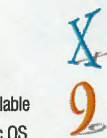
PRICE: \$69 (SRP)

REQUIREMENTS: Power Mac with available PCI slot, Mac OS 8.6–9.x for USB 1.1, Mac OS 10.1 for USB 2.0

### Spiffy

GOOD NEWS: USB 2.0 is theoretically faster than FireWire. Backward-compatible with USB 1.1 devices.

BAD NEWS: Only supports USB 2.0 in Mac OS X. USB 2.0 isn't all that.



PHOTOGRAPHY BY MARK MADEO

Orange Micro's OrangeUSB provides five ports, each supporting both high-speed USB 2.0 and good old USB 1.1, for \$13.80 apiece.

## 2.0 to Go

Orange Micro also offers portable USB 2.0 in the OrangeUSB Hi-Speed CardBus PC Card (\$109, [www.orangemicro.com](http://www.orangemicro.com)). Like the PCI version, the CardBus version supports both USB 1.1 and USB 2.0 devices (simultaneously) under Mac OS X, and only supports USB 1.1 under Mac OS 9. Before you give up on FireWire as the ultimate interface for portables, know this: The card's AC power supply, while not obscenely large, is required—without external power, the card can't even drive a mouse. If you can come up with a good reason to buy this thing, you're more creative than we are.

We kept expecting some kind of modern-day Tom Sawyer to show up and ask if we're still having fun painting the fence.





PHOTOGRAPH BY MARK MADEO



Nikon's Coolpix 2500 looks pretty snazzy, until you notice the fingerprints that inevitably show up on the lens.



PHOTOGRAPH BY ARTHUR BLEICH

The handy swivel lens lets you take flash close-ups without attempting unnatural body contortions.

# Nikon Coolpix 2500

HARDWARE

Nikon touts its 2-megapixel CP2500 as a "new twist on photography," but it's just an old twist with a new spin: a less-expensive, point-and-shoot version of the company's top-of-the-line 900-series cameras.

The CP2500 has curvy edges and an aluminum-and-blue color motif and measures only 4 by 2 by 0.5 inches. The body protects the swiveling 37mm-to-111mm (35mm equivalent), f-2.7 lens when at rest. A slider switch turns it off, or to record or playback mode. The lens swivels independently of the camera's bright, 1.5-inch LCD monitor, so you can easily shoot pictures of yourself.

Despite its good looks, the CP2500 is an ergonomic nightmare—six buttons, a four-way rocker switch, and the monitor are stuffed into a 2-by-2-inch patch of real estate. Perfect for Alice after she drank the shrinking potion, but not for the rest of us. Previous Nikons have had optical viewfinders; when bright sun washed out the LCD monitor (or when you wanted to hold the camera more firmly), you could put it up to your eye. Alas, that feature is gone, and because the lens is housed within a solid frame, swiveling it open is a poke-and-push operation that will inevitably leave greasy fingerprints on the lens.

The CP2500's menus provide basic functions such as control of image size and quality, white balance, sharpness, exposure compensation, and continuous shooting. You can ensure good results by choosing from a dozen scene modes, including sunsets, beach and snow, portraits, landscapes, and fireworks. Missing is an action mode—where the camera would set the highest shutter

speed in its range of 2 to 1/3,000 seconds to capture sports and fast-moving kids.

Shooting with the CP2500 isn't exactly a joy. The image experiences an annoying gray-out while the camera hunts for correct focus after you press the shutter-release button. Nevertheless, you can fire off shot after shot at about a second apart, thanks to the generous buffer. Pressing the Small Pic button instantly makes separate, compressed images for Web or email. There's also a silent-movie mode, but no video-out for displaying your photos on TV.

Getting in or out of macro mode to shoot close-ups sucks—you press an itty-bitty button and then navigate two rows of the Scene menu. Once it's set, though, you can move within 1.6 inches of an object and even use the flash close up with good results. But there's a trade-off: The flash reaches only 5 to 9 feet.



PHOTOGRAPH BY ARTHUR BLEICH

**Blooming creates a halo around the upper-right side of the hydrant, lightening the grass near it and ruining the picture.**

The CP2500's images had well-saturated color and good dynamic range (shadow and highlight detail), but some were affected by *blooming*, which creates halos around bright areas. Picture transfer to computer went smoothly via the included USB cable and Nikon View software, and 7.5-by-10-inch blow-ups (printed on an Epson 785 EPX) looked smooth.

We appreciated the included Lilon battery, but that doesn't redeem having to keep the LCD monitor on all the time—you can't disable it without shutting down the camera or setting it to doze off. We got only 73 Fine-quality pictures (using flash half the time) before the battery abruptly died and needed a three-hour recharge. And getting the 3.7-volt, 1,000mAh battery out of the camera was a two-step chore—we had to tug on a persnickety compartment cover before it swung open.

It all comes down to how much hassle you're willing to endure just to dangle a Nikon from your neck. Our advice? Consider a different camera—one that takes equally good or better images without putting you through hell to get them.—Arthur Bleich

COMPANY: Nikon  
CONTACT: 800-645-6687, [www.nikonusa.com](http://www.nikonusa.com)  
PRICE: \$318 (SRP)  
REQUIREMENTS: USB-equipped Mac, Mac OS 8.6–9.x or 10.1.2 or later

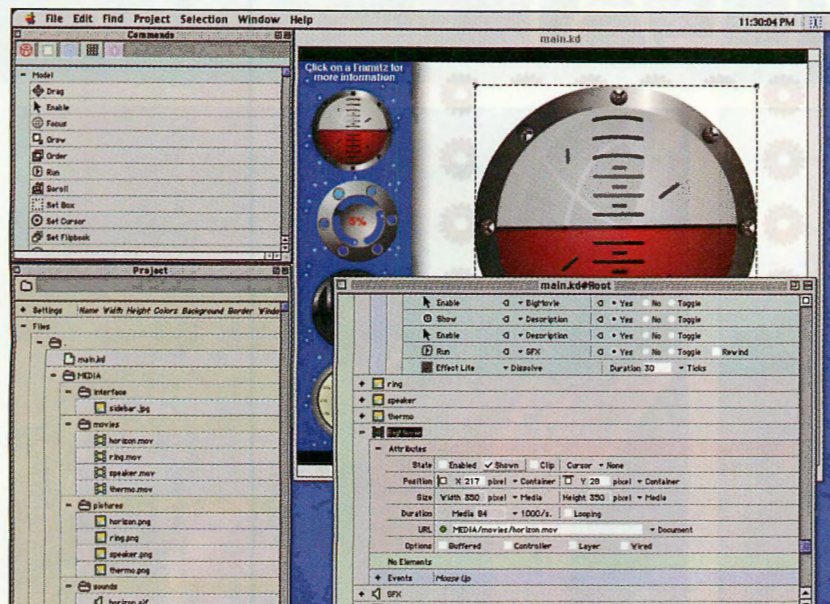


## Yeah, whatever

**GOOD NEWS:** Good image quality (most of the time). Preset modes. 16MB CF card and battery charger.  
**BAD NEWS:** No optical viewfinder. Ergonomically unsound. Lousy battery life. Annoying quirks.







iShell is all about user friendliness: You can get up to speed and start building full-featured, cross-platform applications in a matter of hours.

## iShell 2.5.1

### MULTIMEDIA

Macromedia's Director may be the 800-pound gorilla of multimedia authoring, but that hasn't stopped TribeWorks from developing a compelling alternative. Like Director, TribeWorks' flagship product, iShell, is a rapid-development environment for creating multimedia applications, CD-ROMs, or kiosks, but it offers a much more approachable user interface and an easier learning curve.

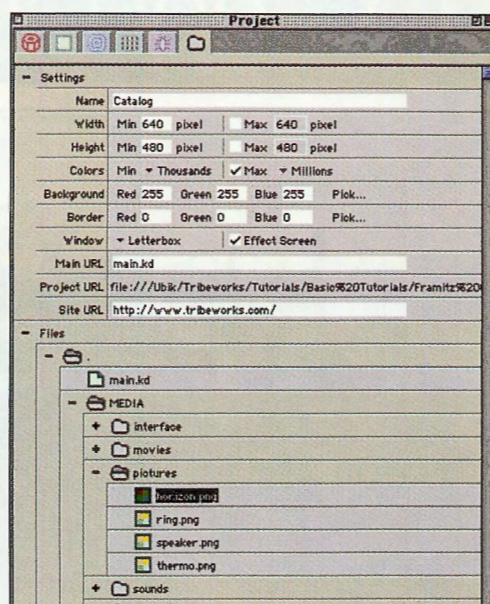
iShell's interface makes good use of expandable, hierarchical windows; you start new projects via the Project tab of the application's main window, where you'll find the Settings and Files menus. By expanding the Settings menu, you get access to project attributes like screen dimensions, background colors, and window type, all via easy-to-understand fields, check boxes, and drop-down menus.

When you double-click an item in the Layout screen, you get a list of menus, including Attributes, Elements, Events, and Properties. By expanding the Elements menu, you can see (by name) every image, movie, sound, or piece of text in your project. Expand the menu for a media element, and you can edit attributes such as position or dimensions, or drag events like Mouse Down to it. To make a circle bounce when a user clicks it, just drag

events and commands from a palette and adjust some settings. iShell isn't so easy that you can master it without reading the manual, but you can begin making full-featured projects in a matter of hours instead of days.

Aside from ease of use, iShell has a lot of other things going for it. For one, you can build apps on your Mac and create runtimes for both Mac and Windows. Perhaps the neatest feature is the ability to create nonrectangular windows. If your project would look better as an oval or octagon, iShell can do it. iShell also has a robust variable and messaging feature set that you can implement without learning code.

Buying iShell is more like joining a club than purchasing software. You can download the full-featured iShell and play with it for free, but you have to pay to use it for a commercial project. You can make a onetime software purchase or buy into TribeWorks' Silver, Gold, or Educational membership. Each membership entitles you to free upgrades for a year, a how-to book, and discounts on renewals. Depending on your membership, you get different levels of access to support, the extensive user community, and training. For example, Gold members can dig into the app's source code and work with the Software Development Kit to extend iShell's functionality. Gold members also get access to a vibrant user email list that can solve virtually any problem—fast.



You access iShell's controls through hierarchical expanding menus like the Project window, where you can set a background color or determine a window type.

As great as iShell is, it isn't for everyone, and it isn't perfect. The biggest problems are that it lacks Director's extensive third-party support, there's no Shockwave-style plug-in for Web apps, and the full enchilada is pricey. It's also a monitor hog. The main application windows, such as Project and Commands, which you pretty much need to keep open continuously, float above every other window, whether you want them to or not. Working on a single 1,024 by 768 monitor was very difficult.

If you're a longtime Director user and depend on Shockwave or Xtras, iShell may not be for you. But if you're just getting started with multimedia authoring, check out iShell. You can try it for free; you'll learn the basics fast, get about 80 percent of Director's functionality out of the box, and gain some great features Director lacks.—Rick Sanchez

COMPANY: TribeWorks  
CONTACT: 415-674-5555, [www.tribeworks.com](http://www.tribeworks.com)  
PRICE: \$2,750 (Gold membership), \$995 (Education membership), \$975 (Silver membership)  
REQUIREMENTS: Power Mac, Mac OS 8.6-9.x, 32MB of RAM

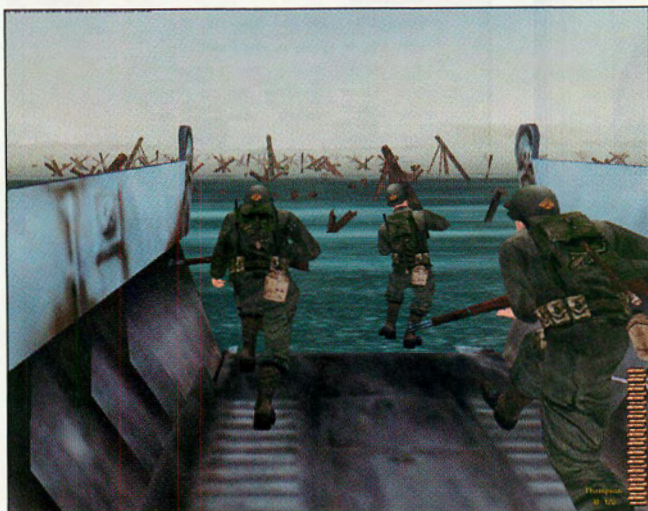
### Spiffy

GOOD NEWS: Easy to learn and use.  
Build on Mac, run on Mac and PC.  
BAD NEWS: Minimal documentation.  
Little third-party support. Poor use of screen real estate.





We're game, are you?



Playing through this beach landing in *Medal of Honor: Allied Assault* could, quite literally, take your breath away.



Check out the cool blue interface—and the incredibly detailed textures—in *Unreal Tournament X*.

# New and Improved!

The Latest New Release and an X-ified Old Favorite

## MEDAL OF HONOR: ALLIED ASSAULT

Aspyr ([www.aspyr.com](http://www.aspyr.com))

Available August 2002

An action-packed first-person shooter, *Allied Assault* sets you smack-dab in the middle of World War II. You play Lieutenant Mike Powell, a member of the First Ranger Battalion. With historically accurate weapons and vehicles, as well as weather and time-of-day effects, the game strives for realism as you complete campaigns from the beaches of Normandy to the borders of Germany, from North Africa to Norway. Offering unexpected challenges, this game is not a mindless shooter.

## UNREAL TOURNAMENT X

Westlake Interactive ([www.westlakeinteractive.com](http://www.westlakeinteractive.com))

No firm availability date

Back in April, Westlake Interactive released its third preview version of *Unreal Tournament X*, a free download that works with any already-installed copy of the full game. Preview 3 improves mouse control, activates mouse wheels and up to three mouse buttons, and fixes an incorrect menu line. Westlake is working on this free game between other projects, so there's no firm release date.

—Carrie Shepherd

## The Indie Taste of Bad Milk

Offerings from the Independent Games Festival

### \$15,000 Grand Prize Winner

#### BAD MILK

DreamingMedia

([www.dreamingmedia.com](http://www.dreamingmedia.com))

Available now

*Bad Milk* is a surreal, artsy adventure game that's akin to attending a modern art exhibit you don't quite understand. Players push, pull, and explore pieces of video to solve puzzles, sometimes in complete darkness with only hearing and virtual touch as guides. The game also won the Innovation in Audio award.



### Finalist

#### EGG FILES

Flying Mikros Interactive ([www.flyingmikros.com](http://www.flyingmikros.com))

Expected availability in September

*Egg Files'* developer, Nikita Mikros, calls the game zany, frenetic, and addictive. Players, armed with a laser-lasso Rooster Booster, try to save the universe from aliens that fall from the sky. Although Mikros developed the game under the moniker Flying Mikros Interactive, Mikros' new company, Black Hammer Game ([www.blackhammergame.com](http://www.blackhammergame.com)), will most likely release it.



### Finalist

#### BANJA TAIYO

Team ChmAn ([www.banja.com](http://www.banja.com))

Available now

*Banja Taiyo*, which won the Innovation in Visual Art award at the IGF, is an episodic Internet game in which players assume the role of Banja the Rasta (see below) and explore and develop a mysterious island with other online players.





# Look-See, You Must

Inside Star Wars Galactic Battlegrounds

We told you about Aspyr's plans to publish Star Wars Galactic Battlegrounds in May. Now, here's a peek inside the game, which looks a lot like the civilization-building Age of Empires II, but with Stormtroopers and AT-ATs.—*Carrie Shepherd*



Roger Roger! Battling the rubes on Naboo isn't too tough for the mighty Trade Federation.



Who hasn't wanted to command a platoon of Stormtroopers? Actually, give us a platoon of Chewbaccas instead!

**GAMES NEWS** Blizzard Entertainment ([www.blizzard.com](http://www.blizzard.com)) released an add-on for Diablo II and its Lord of Destruction expansion for Mac OS X. MacPlay ([www.macplay.com](http://www.macplay.com)) released a beta version of a patch that adds multiplayer support through GameRanger ([www.gameranger.com](http://www.gameranger.com)), the online Mac-only game service. The patch includes minor speed and stability improvement. Feral Interactive ([www.feral.co.uk](http://www.feral.co.uk)) is developing the Creature Isle add-on for its god-sim game, Black and White. Creature Isle offers new trials, new skills, and new challenges for your creatures, including the ability to train their own creatures and to have love interests. No release date is set. Feral is also releasing a Black and White multiplayer networking patch.—CS

## Finalist

### INSANIQUARIUM

Flying Bear Entertainment  
([www.freshpulp.com/fishtank](http://www.freshpulp.com/fishtank))  
Available now

A Web-based Flash game, Insaniquarium is part strategy and part virtual pets. In other words: Feed the fish, and you'll earn money. This game won the Innovation in Game Design award.

## Finalist

### KUNG FU CHESS

Shizmoo ([www.kungfuchess.com](http://www.kungfuchess.com))  
Available now

This Java-based chess game won the Audience Award at the IGF. Players move whenever they want without waiting for turns (but once you move a piece, you can't move it again for 10 seconds). There's even a four-player mode.

## SCREENSHOT OF THE MONTH

She's a swinger!



Contributor: George Luong

Game: Oni (Bungie/GodGames, <http://oni.godgames.com>, discontinued)

Statement: Konoko takes down three baddies with a single lariat.

Think you can do better than this? Send your best screenshots to [letters@macaddict.com](mailto:letters@macaddict.com) with the subject line "Screenshot of the Month." Tell us your name, the name of the game you were playing, and just what the heck you were trying to do.





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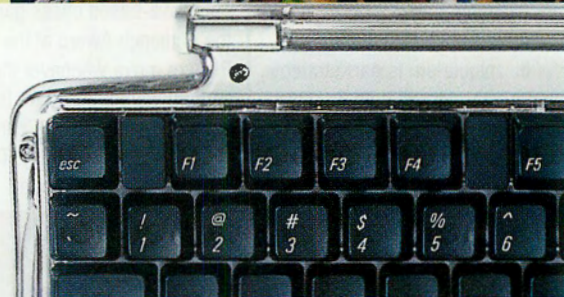
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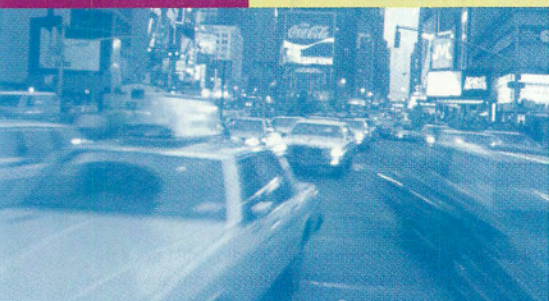
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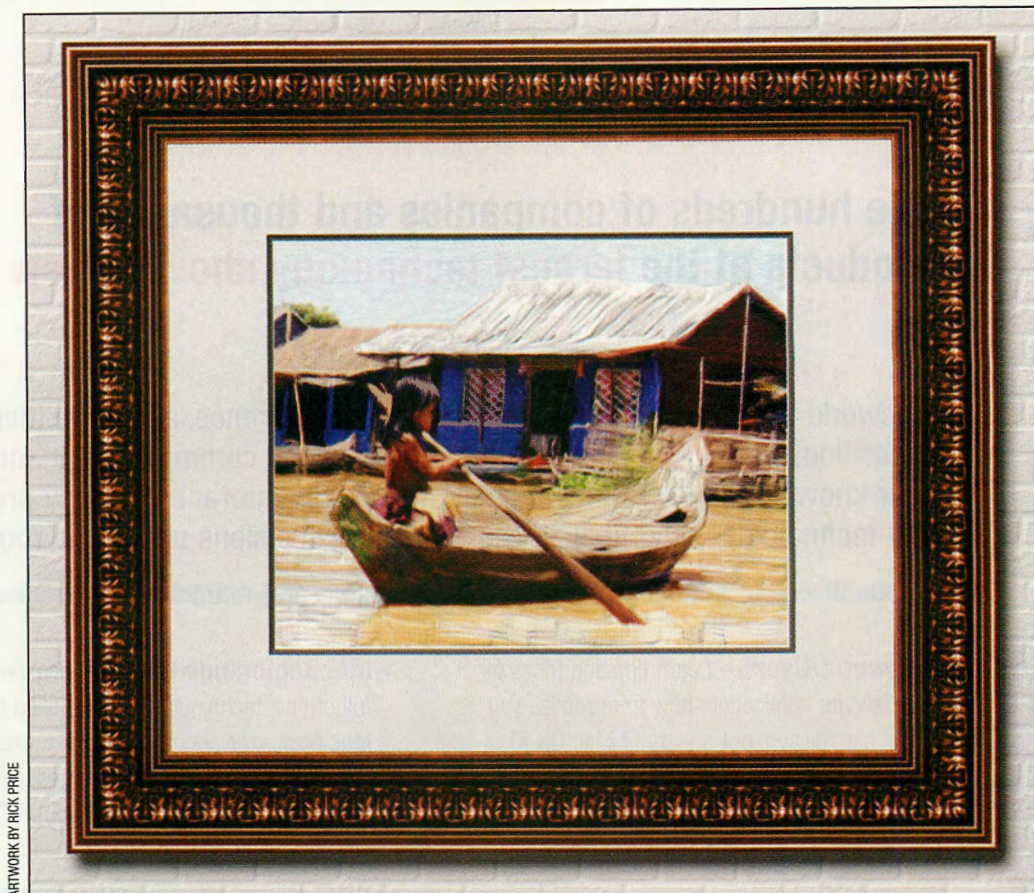


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ARTWORK BY RICK PRICE

Why risk being arrested—as you tiptoe down museum halls with a Renoir tucked under your arm—when you can create your own fine-art masterpiece?

# Create Fine Art Digitally

by Rick Price and Cathy Lu

Oh, the trials and tribulations of the tortured artist. Pierre-Auguste Renoir painted with a brush strapped to his arm after arthritis consumed the strength of his hands. Vincent Van Gogh painted some of his most memorable work while committed to an asylum. Michelangelo nearly went blind painting the Sistine Chapel when paint dripped from the ceiling into his eyes as he worked.

Though you may prefer to romanticize yourself as a tortured soul, you need not endure any paint-afflicted agonies if you use your Mac to create fine art. In fact, you can create digital masterpieces worthy of a museum plaque with as little effort as a few mouse clicks. Or you can spend extended sessions in front of a Mac monitor to put the finishing touches on your *pièce de résistance*. And the best part? You don't even need artistic talent to produce good-looking digital paintings. Plus you won't have to wash brushes, dig paint from under your fingernails, or pass out from paint fumes.

If you're looking to decorate your walls with some new art, we show you how to create digital paintings worthy of showing off, using three different apps: Adobe's Photoshop (\$609,

[www.adobe.com](http://www.adobe.com)), Synthetik Software's Studio Artist (\$379, [www.synthetik.com](http://www.synthetik.com)), and Procreate's Painter (\$479, [www.procreate.com](http://www.procreate.com)). So put away your canvas, your dirty paintbrushes, and those Bob Ross tutorial videos, and boot up your Mac.

## In This Section

### p65 Fine Art in 5 Minutes

If you don't think you've got artistic talent to boot or you're just looking for instant gratification, you can employ a few Photoshop filters to do the artwork for you. Find out how now.

### p66 Paint Like the Masters

Want artistic control but lack artistic confidence? Studio Artist does a little digital wizardry to help you create digital paintings from any image. We show you how to use its power to create a painting that would make Monet proud.

### p68 Paint Your Own Digital Masterpiece

If your artistic abilities go beyond simple stick figures, Painter has the tools to help you make beautiful art digitally. We show you how to create an oil painting without the expense of paint, canvas, or studio space.







No whining—  
anyone can do this!



It'll take some  
effort, but you  
can do it.



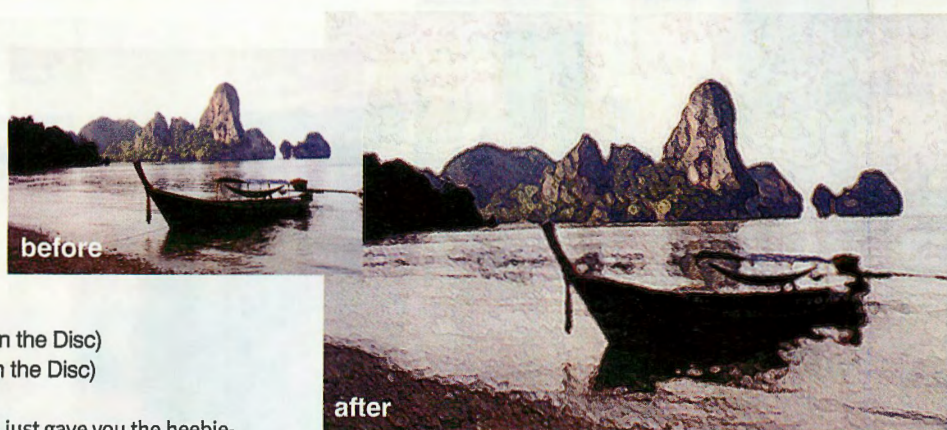
This stuff's  
for the pros.

# Fine Art in 5 Minutes



## WHAT YOU NEED

- Photoshop 4 or later or Photoshop Elements (tryout on the Disc)
- Digital photo or thai-boat.tif (on the Disc)

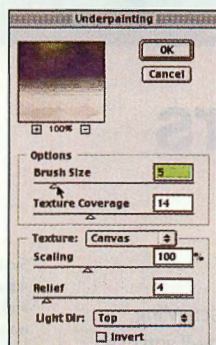


PHOTOGRAPH BY RICK PRICE

**F**ourth-grade art class. If those four words just gave you the heebie-jeebies, take heart. You too can create art worthy of a frame if you've got a few Photoshop filters up your sleeve. Here's how.

**1 Give Your Pic a Foundation** You need to apply paint to some kind of surface to make a painting; we opted for a pseudo canvas texture.

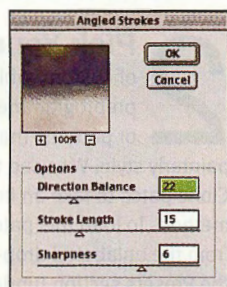
Open either your own picture or thai-boat.tif in Photoshop. Under the Filter menu, select Artistic, then Underpainting. From the Texture drop-down menu, select Canvas. The sliders control various texture characteristics; use our settings or tweak the sliders to your liking. Click OK when satisfied.



To give your photo a painted-on-canvas appearance, apply the Underpainting filter.

**2 Create Brush Strokes** To create linear brush strokes, select Brush Strokes, then Angled Strokes from the Filter menu. This filter paints lighter areas in one direction and darker areas in the opposite direction. Tweak the three sliders to adjust the angle, length, and sharpness of the strokes as you wish, or use our settings. Then click OK.

Create brush strokes using the Angled Strokes filter to give your image more of a painted look.



**3 Add Paint Texture** To give the paint more texture, select Artistic, then Paint Daubs from the Filter menu.

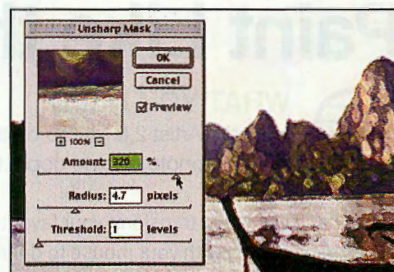
Choose Simple from the Brush Type drop-down menu to create a smooth, round texture. Then set the Brush Size and Sharpness to your liking, or steal our settings, and click OK.

Roughen the paint texture using the Paint Daubs filter, which adds more variation to the brush strokes.



**4 Unsharp to Sharpen** To bring sharpness to the strokes, use Unsharp Mask; select Sharpen from the Filter menu, then Unsharp Mask. Use the Amount slider to control contrast between pixels, the Radius slider to adjust the affected number of pixels that surround the sharpened edge pixels, and Threshold to control how many pixels the filter affects (0 means all pixels). Use our settings or choose your own, click OK, and admire.

We used the Unsharp Mask filter to make our paint strokes more crisp and pronounced.



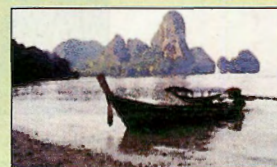
## Different Strokes for Different Folks

Got a penchant for charcoal sketches? Or maybe you prefer looking at the world through watercolor glasses? Here's how to create both formats in Photoshop:

**CHARCOAL** Open thai-boat.tif. Set the foreground color to black and the background color to white. From the Filter menu, select Sketch, then Charcoal. Set Charcoal Thickness to 2, Detail to 3, and Light/Dark Balance to 72, and click OK. Select Filter > Artistic > Smudge Stick; set Stroke Length to 7, Highlight Area to 11, Intensity to 2, and click OK.



**WATERCOLOR** Open thai-boat.tif. Select Filter > Sketch > Water Paper. Set Fiber Length to 26, Brightness to 60, and Contrast to 63, and click OK. Select Filter > Artistic > Watercolor. Set Brush Detail to 6, Shadow Intensity to 0, Texture to 3, and click OK. Monet-zing!







Price's paint job took a lot less time than he's willing to admit. That's the beauty of Studio Artist!



PHOTOGRAPH AND ARTWORK BY RICK PRICE

## Paint Like the Masters



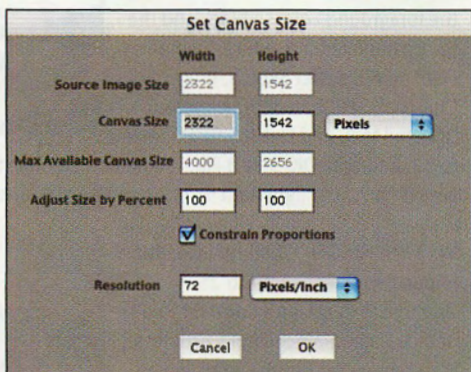
### WHAT YOU NEED

- Studio Artist 2.0 (demo on the Disc)
- Digital photo or blue doors.tif (on the Disc)

What if you could transform your favorite photo into a painting by simply scrawling haphazardly with your mouse to define the brush strokes? Well, you can—if you use Studio Artist. This program allows you to paint the likeness of a source image onto a blank canvas using patches that replicate almost any painting style, no talent required. Here's how to fake a style similar to that of famed Impressionist painter Pierre-Auguste Renoir.

Synthetic Software calls its program **Studio Artist** a graphics synthesizer. The app offers painting and drawing tools, image-processing capabilities, warping and other image-adjusting effects, autorotoscoping, and morphing effects, among a slew of other features (see *Reviews*, Jun/02, p52). To get the most out of the program, you really need to plow through its included tutorials (8 hours' worth!).

**1 Reveal Your Source** Launch Studio Artist. In the Open Source Image dialog box, navigate to your photo or blue doors.tif and click Open. In the subsequent Set Canvas Size dialog box, you can alter the canvas size and resolution if desired. If you're using blue doors.tif, leave the canvas size the same as the image size. If you're using your own photo, feel free to alter the values as you wish. Click OK to launch the interface.



Because you're creating a new graphic, you can turn low-res photos into high-res paintings by upping the values here.

**2 Pick Your Paint** Studio Artist features a wealth of customizable PaintPatches, which are essentially preprogrammed brush strokes or patterns that replicate a painterly style. We used the Impression Clone patch to fake an Impressionistic method. To load this patch, select Default from the unlabeled drop-down menu in the Presets section (under the question mark), select General from the Category drop-down menu, and select Impression Clone from the Patch drop-down menu. The current patch's thumbnail appears under Presets.

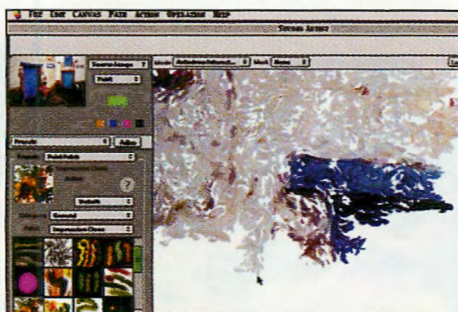


Load a PaintPatch Preset by selecting from the various collection choices under the drop-down menus.

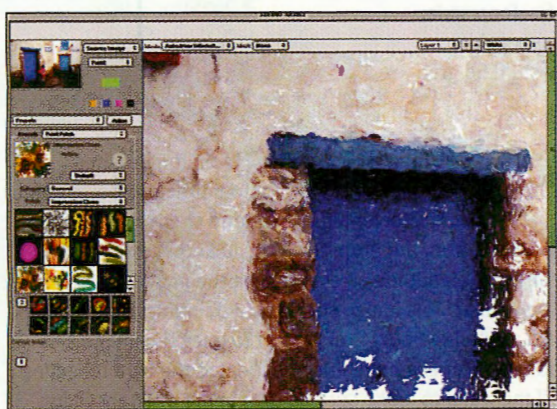


**3 Start Stroking** Enable Studio Artist's draw-assisted technology by selecting Autodraw Interact from the Mode drop-down menu at the top of the interface. This allows you to control the paint coverage on the canvas while the program handles all of the brush strokes and paint colors. First put down a base coat by simply sweeping your cursor in any direction all over the canvas to paint your source image onto the canvas in an Impressionistic style.

To paint, simply sweep your cursor over the canvas; Studio Artist takes care of the brush strokes for you.



**4 Fill 'Er Up** After you lay down the first coat of paint, run your cursor over the canvas again to fill in all the blank spots, using a more refined technique. For best results, divide the canvas into four quadrants and work on one section at a time. To view the nitty-gritty detail, click the plus (+) or minus (-) sign in the upper-right corner to zoom in or out. Keep painting in strokes until you've covered all the white canvas areas. If you don't like the effect a particular stroke creates, paint over the area again and the paint will swish in a different manner.



Run your cursor continuously over the area you've been working on to fill in blank areas.

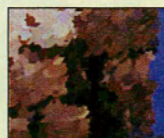
**5 Finishing Touches** When you're done, take a look at your entire painting and stroke over any additional spots you're unhappy with (make sure no visible seams remain at the border of each work section). Then select Save Canvas Image As under the File menu, and save your work in your preferred format (Studio Artist lets you save your work as a Photoshop document, JPEG, TIFF, and other formats). Now go find all the photos you've taken in a park or on a lake, launch them in Studio Artist, and really rip off the master!

You may have to go over some areas repeatedly to cover white spots and maintain a desired stroke.



## More Masters to Mimic

Maybe you're a fan of, say, Van Gogh, but can't quite get those dramatic paint swirls to resemble anything beyond a four-year-old's messy finger-painting. No worries. With the right Studio Artist PaintPatch, the techniques learned in this tutorial, and absolutely zero talent, you can create paintings that feature brush strokes similar to those of the masters. Here are a few examples we created.



### GEORGES SEURAT

Seurat was known for an art style called

Pointillism, which involves applying color onto the canvas in small, uniform dots. By applying the AutoPaint patch (select Paint Styles from the unlabeled drop-down menu, Clone Styles from the Category drop-down menu, and AutoPaint from the Patch drop-down menu), you can achieve a similar effect.



### VINCENT VAN GOGH

You can use the Rough In Color3 patch (select Default from the unlabeled drop-down menu, Rough In Color from the Category drop-down menu, and Rough In Color3 from the Patch drop-down menu) to copycat the master's loose, swirling strokes and create what could pass for an unfinished Van Gogh painting.



### CLAUDE MONET

While the colors in this work may not be ones Monet would have preferred, the brush strokes would fit right in with his characteristic style. To get this effect, use the Cloner1 patch (select Default from the unlabeled drop-down menu, Artistic Cloners from the Category drop-down menu, and Cloner1 from the Patch drop-down menu).







before

# Paint Your Own Digital Masterpiece



## WHAT YOU NEED

- Painter 7 (trial on the Disc)
- Girl in Boat.tif (on the Disc)



after

PHOTOGRAPH AND ARTWORK BY RICK PRICE

Artistically gifted and looking for a different avenue to showcase your skills? Here's a more challenging project for you. Learn how to paint an image in digital oils, freeform style, with Painter (no cheats or training wheels this time, kiddies), using a photo as a guide. This is as close to real painting as it gets without actually touching the gooey stuff! So grab Girl in Boat.tif off the Disc and prepare to wield your virtual brush.

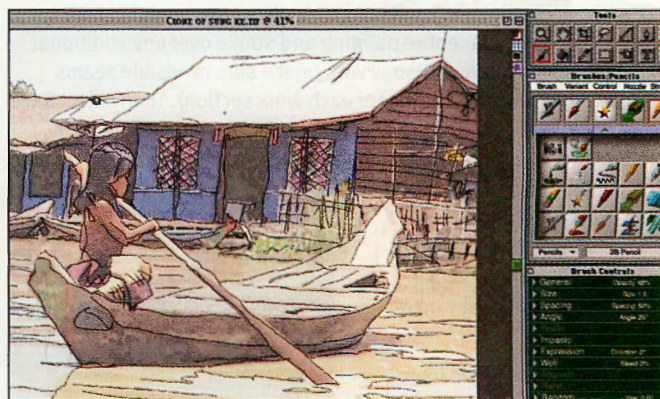
Price's freeform digital painting has much of the same texture and feel as a painting in oils.

**1 Create a Guide** To get some direction on where to stroke your digital paint, turn the photo into a tracing guide. Open Girl in Boat.tif in Painter. From the File menu, select Clone; this command creates a copy of your image in another window. Select the entire clone (Command-A) and press the Delete key; the canvas will go blank, but don't worry. Under the Canvas menu, select Tracing Paper, and the picture reappears as a partially transparent image that you can trace.



To replicate the process of sketching forms with pencil before painting, turn Price's photo into a traceable image.

**2 Trace the Image** In the Brushes palette, select Pencils from the drop-down menu in the lower-left corner, and choose 2B Pencil from the drop-down menu in the lower-right corner. Then outline all elements in the image (this can take some time). This image serves as a painting guide, kind of like a coloring book. Don't forget to trace the image's nuances (for example, Price delineated the light reflecting off the water to make sure he caught the differences in color). Use the Scale slider at the bottom of the window to zoom in, and don't worry about total accuracy—your lines are merely guides that will end up covered in paint.



Trace around all the elements and nuances; this coloring-book outline will serve as your painting guide.

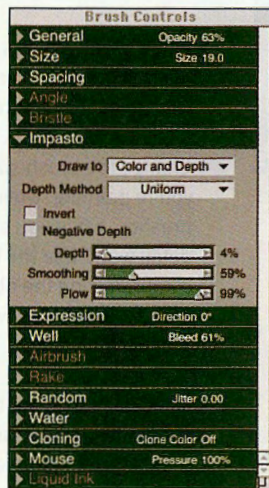


**3 Delete the Image** When you're finished, get rid of the photo by selecting Tracing Paper again from the Canvas menu. Poof—the source image disappears, leaving you with just your tracing. Switch to the original photo in the first window and use the Scale slider at the window's bottom to size down the image. Then size down the entire window and keep it handy as a reference next to your tracing.



After turning off the tracing paper, scale down the original photo and keep it handy for reference.

**4 Grab a Brush** For a thick, oil-like paint that gives the illusion of depth, select Impasto from the lower-left drop-down menu in the Brushes palette, and Smeary Round from the lower-right drop down menu. In the Brush Controls palette, click the Impasto disclosure triangle to open its parameters. Depth controls the depth of a stroke—the higher the value, the deeper the stroke. Set Depth to 4 percent (we recommend using a low percentage in lighter areas like the sky and higher settings for extreme looks). Smoothing controls the amount of texture applied within a stroke; set it to 59 percent. Plow controls how much the overlapping strokes interact. At high percentages, a new stroke will displace, or *plow* through, an existing stroke; set Plow to 99 percent.



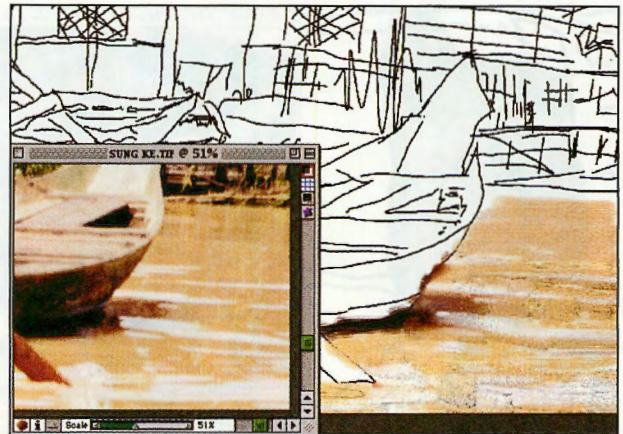
To alter the paint's texture and interaction, adjust the parameter sliders in the Brush Controls palette.

**5 Paint the Sky** To choose the paint color, Option-click an area of the sky in the original photo (your reference image) to sample its light-blue color. Then go back to the tracing window and drag the cursor horizontally across the sky to paint. Make sure you paint *with* the grain of an element to maintain the flow of its architectural lines or organic nature. To make the transition from one object to another, paint over the pencil lines, but don't cover them completely.



Price painted the sky all one color, since that's how it appears in the original image.

**6 Paint the Water** Sample the water's color at the bottom-right corner of the reference photo, then paint in the water at the bottom-right corner of your canvas with horizontal strokes. Paint the basic tones first, then the highlights. Keep sampling the original picture to change paint colors accordingly, and blend the colors until everything looks cohesive (get rid of the pencil lines, too). Adjust the Depth and Smoothing sliders in the Brush Controls palette to vary the texture; with darker colors, increase Depth to get the appearance of thicker paint. Give highlight areas a softer look by increasing Smoothing. To change the brush size, adjust the Size slider in the Brush Controls palette. Continue working until you've submerged all water areas in paint.



To create the illusion of a true oil painting, blend the colors as you work.

**7 Raise the Roof** Next, work on the roof in the upper-left corner. Though it looks like your average tan thatched roof, it actually features many subtle shades of brown and tan. Using the same color-sampling and painting techniques, paint the roof areas from the darkest color to the lightest, using diagonal strokes that go with the roof's grain. If you find yourself accidentally painting into other areas, like the sky, just repaint over your mistakes. Price has a trick for creating a seamless blend and nice, neat edges; paint a thick horizontal stripe at the top of the roof to create a pronounced border between it and the sky. Then blend the horizontal stroke with the rest of the roof by painting strokes downward and diagonally from the horizontal stroke to follow the roof's grain.



To create a seamless transition between the roof and sky, paint a horizontal stroke along the rooftop and blend it downward.

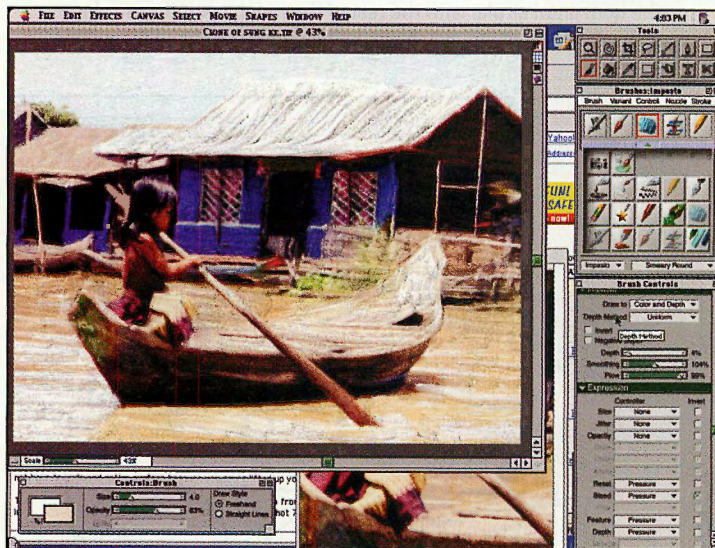


**8 Paint the Girl** When painting objects, it helps to first paint in any background colors similar to the object you're painting, as these surrounding colors can affect color perception. For example, you may perceive the girl's hair as black, but against the black background, you can see its purplish tinge. This effect is known as *simultaneous contrast*. Paint a bit of the background and then start the hair, painting the basic colors first. Paint in the direction of the hair's flow, whether it's falling down over her shoulders or sweeping back behind her ears. These details simulate realistic qualities within the painting. With the face, zoom in extremely close (we're talking facial-pore level) on both your reference image and the canvas to capture subtle color variations and intricacies in full detail.



Paint in a bit of the surrounding background to keep its blackness and the girl's hair color from fusing into one shade.

**9 Finishing Touches** Continue painting the rest of the image, using the same techniques you've learned, until you've completely covered the canvas (just a minor matter of spending 10 or more hours blocking in sections and blending them with others—you can do it!). Then do the final touchups, adding highlights and adjusting colors as needed. When you're satisfied, print out your magnum opus on a nice semigloss or matte paper—or even on real canvas (check out Pictorico's selection of fine-art media at [www.pictorico.com](http://www.pictorico.com)), and hang it on your wall for all to admire.



Painting the entire image involves time-consuming, detailed work; make sure everything blends seamlessly.

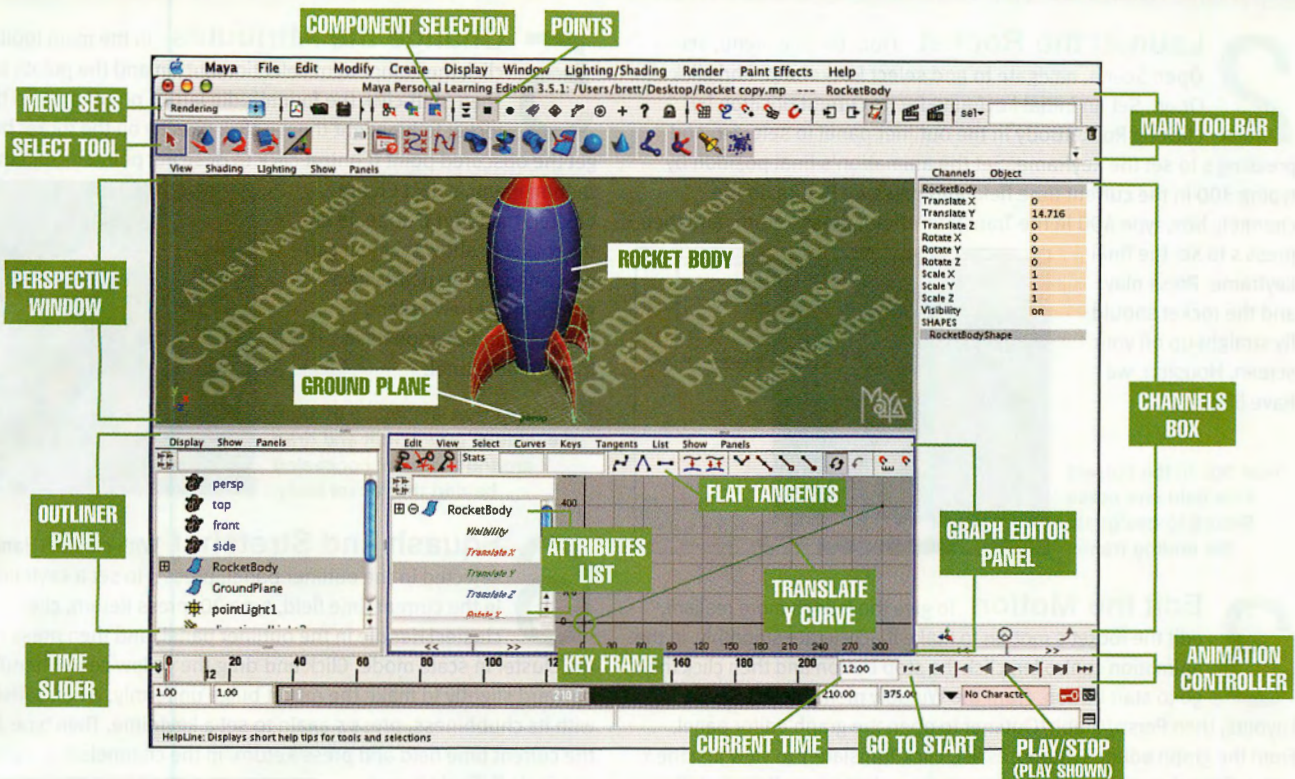
## Price's Painter and Painting Pointers

Got two left thumbs when it comes to painting? Here's some advice from Rick Price to help you build your own masterpiece:

- When painting detailed areas, zoom in close for precision work. However, don't forget to zoom out often to see what your painting actually looks like and how the area you're working on relates to the whole piece.
- Even if you're just painting a wall, keep in mind that most objects include multiple colors. As in traditional painting, start with the darkest color first and then gradually move to the lightest color—the highlights should be your last strokes.
- Remember to lift your brush (the mouse or pen) every now and then instead of painting in one long, constant motion. That way, if you want to undo strokes, you don't have to undo an entire surface.
- When picking colors from the original image, zoom in really close so you can see the individual pixels and choose exactly the color you want.
- Change the brush size to accommodate the object you're painting. Obviously, large areas call for bigger brushes, while you should employ smaller ones for detail work. Use the largest brush you can without compromising the object you're painting; otherwise, you may get too finicky with a smaller brush and overwork the piece.
- You can change the brush size quickly in Painter by simultaneously pressing Command-Option-Shift and dragging your mouse or pen to adjust. The dragging motion brings up an outline of a circle representing the size.
- Even though we had you turn off Tracing Paper (the partially transparent image) before you started painting, it's still available. Turn it on if you need extra guidance.
- Most artists have one direction in which they feel most comfortable painting, such as horizontally or vertically. As in traditional painting, you can rotate the Painter canvas to gain more stroke control (say, for painting thin vertical poles). In the Tools palette, click and hold down the grabber tool (the hand), and select the rotate tool. Then just click and turn your canvas to your heart's content.

Rick Price, a Mac enthusiast and San Francisco-based artist who makes his living painting private commission and gallery work, created all of the main artwork in this article. He's also painted murals on display at the Bellagio Hotel in Las Vegas, the Saint Francis Hotel in San Francisco, and various Il Fornaio restaurants nationwide. To view more of his work, check out his Web site, [www.rickprice.net](http://www.rickprice.net). Cathy Lu, who worked with Price to write this article, gets assurance from her parents every day that writing computer-magazine articles is a very special art, too.





# Animate 3D Objects in Maya PLE

by Sean Wagstaff



## WHAT YOU NEED

- Maya PLE (on the Disc)
- Mac OS X
- MacAddict Maya Tutorial Files (on the Disc)

You may have big dreams about working at an imaginative animation company like Pixar or PDI/Dreamworks, but if you don't have the 3D skills, how do you expect to get your foot in the door (unless sweeping floors is your calling)? Luckily for you, the folks at Alias|Wavefront understand the need to learn, and are offering their full-fledged, professional 3D-modeling and -animation package, Maya (formerly \$7,500, now \$1,999; [www.aliaswavefront.com](http://www.aliaswavefront.com)), for free as a learning tool for animators-in-waiting.

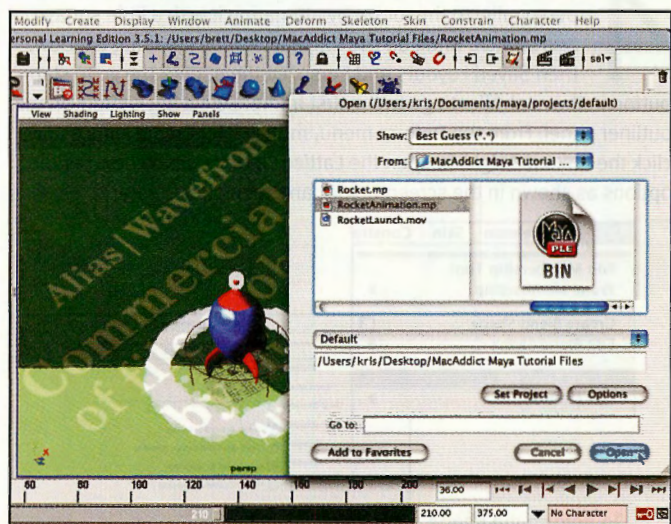
Dubbed Maya Personal Learning Edition (PLE), this package is a fully working version of Maya but watermarks all projects to prohibit commercial use. And we've got it for you on this month's Disc (you need a three-button mouse to use it fully, but not for our tutorial). To get you started, we show you how to animate a 3D rocket, which we modeled in Maya, and if you're incredibly ambitious, we offer an introduction to particle effects so you can create the smoke blast—take a peek at RocketLaunch.mov (on the Disc) to see the rendered animation. So grab the files from the Disc and get ready for liftoff.



Full, free version of Maya Personal Learning Edition and the MacAddict Maya Tutorial (containing the project files and final rendered movie used in this how-to)

Get familiar with these Maya PLE interface windows and tools—you'll need 'em to launch our rocket.

**1 View the Launch** Before you get started, first take a look at what it is you're going to animate. Launch Maya PLE. From the File menu, select Open Scene, navigate to and select RocketAnimation.mp, and click Open. Click the play button in the animation controller to view the sequence; the rocket animates as quickly as your Mac's 3D card allows, showing deformation and particle effects. OK, now create this animation using our 3D model.

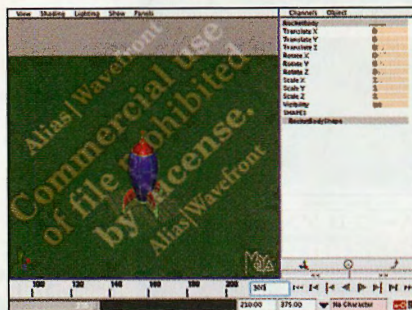


Open our unrendered animated file in Maya PLE to get a feel for how the project works.



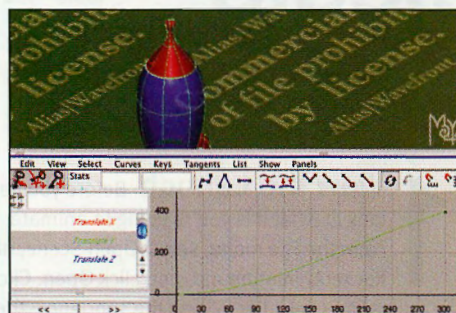
**2 Launch the Rocket** From the File menu, select Open Scene, navigate to and select Rocket.mp, and click Open. Set an initial keyframe for its current position by clicking RocketBody in the outliner panel to select it, and pressing s to set the keyframe. Set the animation's final position by typing 300 in the current time field and pressing Return. In the channels box, type 400 in the Translate Y field, press Return, and then press s to set the final keyframe. Press play, and the rocket should fly straight up off your screen. Houston, we have liftoff!

Type 300 in the current time field and press Return to designate the ending frame.

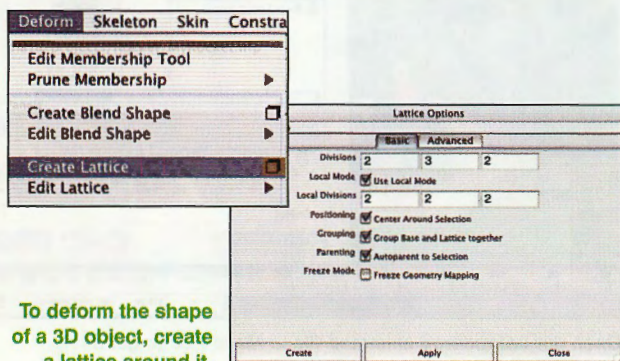


**3 Edit the Motion** To give the launch more realism, edit the rocket's motion to make it accelerate smoothly. In the animation controller, click the stop button and then click the go to start button. From the Window menu, select Saved Layouts, then Persp/Graph/Outliner to open the graph editor panel. From the graph editor's attributes list, click Translate Y to view just the Y curve. From the graph editor's View menu, select Frame Selected. Then click the first keyframe (the dot at the bottom of the line), and click the flat tangents button; the line changes to a graduated curve. Click play to watch the rocket accelerate smoothly away from the ground.

To create realistic acceleration, edit the Translate Y curve to alter the rocket's speed.



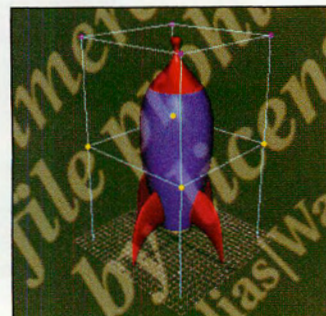
**4 Give the Rocket Character** Add some personality to the rocket by animating it with a little squash and stretch. Bring up the original view by selecting Window, then Saved Layouts and Persp/Outliner. Click the go to start button in the controller to go to the first frame. Select RocketBody in the outliner panel. From the Deform menu, mouse over Create Lattice and click the box to its right to open the Lattice Options dialog box. Set the options as shown in the screen below, and then click Create.



To deform the shape of a 3D object, create a lattice around it.

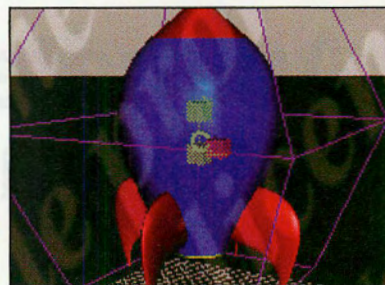
**5 Change the Attributes** In the main toolbar, click the component selection button and the points button. Then Shift-click the four middle lattice points around the rocket to highlight them—click directly on the rocket body to get the obscured point (Control-click to deselect points). From the Deform menu, select Create Cluster; the letter C appears on the rocket to show that you can now animate the points as a group, and a new object, cluster1Handle, appears in the outliner panel.

To get that last lattice point in the middle, press Shift and drag around the point concealed behind the rocket body.

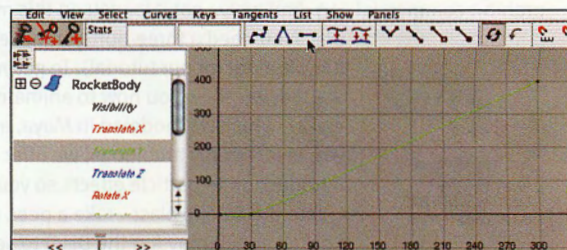


**6 Squash and Stretch It** With cluster1Handle selected in the outliner panel, press s to set a keyframe. In the current time field, type 20, press Return, click cluster1Handle in the outliner panel, and then press r to put the cluster in scale mode. Click and drag the yellow center handle outward slightly to make the rocket bulge uniformly. When satisfied with its chubbiness, press s again to set a keyframe. Then type 30 in the current time field and press Return. In the channels box, type 1 in the Scale X, Scale Y, and Scale Z fields to return the rocket to its original shape. Press s to set another keyframe. Click the select tool to turn off the manipulation handles.

To make your rocket bulge, grab the yellow handle and pull outward.



**7 Retweak the Motion** Because we want the rocket to squash and stretch before it leaves the ground, leave the time slider at frame 30 and click RocketBody in the outliner panel. In the channels box, type the number 0 in the Translate Y field, press Return, and press s to set a keyframe. Click play to view your work; at frame 20, notice that the rocket's fins sink strangely underground. To fix this, open the graph editor (Window > Saved Layouts > Persp/Graph/Outliner), and click Translate Y in the attributes list. Select the first two keyframes by dragging a marquee around them with the cursor, then click the flat tangents button to flatten the curve between them. Switch back to the original view (Window > Saved Layouts > Persp/Outliner), uncheck Deformers from the perspective window's Show menu, and press play to watch your rocket in action.

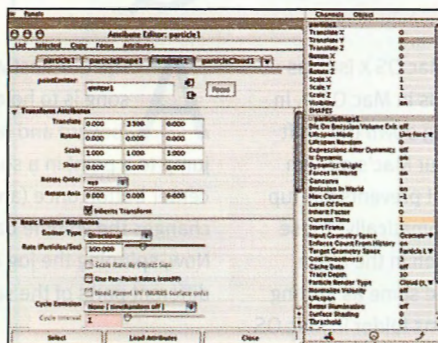


Correct the sinking rocket effect by flattening the first two keyframes of the Translate Y curve in the graph editor.



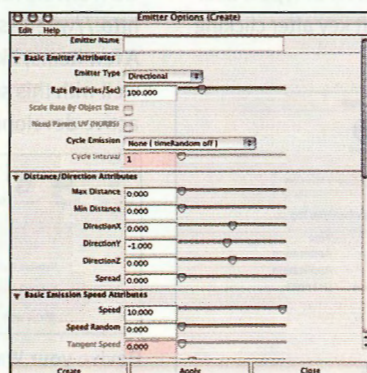
**8 Get the Smoky Details** OK, folks, creating smoke effects is tough—even if you don't inhale. But if you'd like to try, follow the next few steps to get started. For a detailed view of how we configured the effects, open *RocketAnimation.mp* (save your newly created animation first), click any object in the outliner panel, and press Control-A to open the Attribute Editor window. In some cases, an object may have attributes for multiple components; you can view these by clicking any component tab in the Attribute Editor.

Creating the booster blast with particle effects can be a tedious lesson in trial and error. Shown is just one effect's attributes.



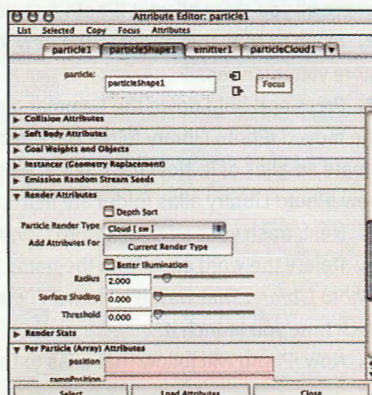
**9 Have a Blast** Select Dynamics from the menu sets drop-down menu to change the mode. From the Particles menu, mouse over Create Emitter and click the box to its right to open the Emitter Options dialog box. From the Emitter Type drop-down menu, select Directional. Under Distance/Direction Attributes, set DirectionY to -1, and click Create. Click emitter1 in the outliner panel to select it, then Command-click RocketBody to subselect it. From the Edit menu, select Parent to engage RocketBody as emitter1's parent; this allows the rocket to control the emitter's motion.

Setting Emitter Type to Directional and DirectionY to -1 forces the particle effects south.



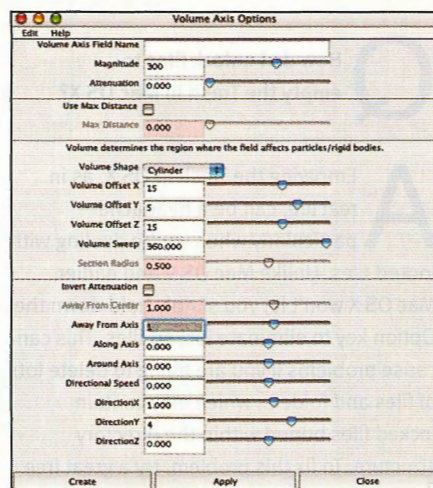
**10 Create Emissions** To set attributes for the downward blast, click particle1 in the outliner panel and press Control-A to open the Attribute Editor window. Click the particleShape1 tab, scroll down to the Render Attributes pane, and select Cloud [sw] from the Particle Render Type drop-down menu. Underneath, click the Current Render Type button and set Radius to 2. Scope out our settings and study Maya's documentation to understand the implementation of these advanced effects.

Create the cloud at the base of the emissions blast by altering the particle shape in the Attribute Editor.

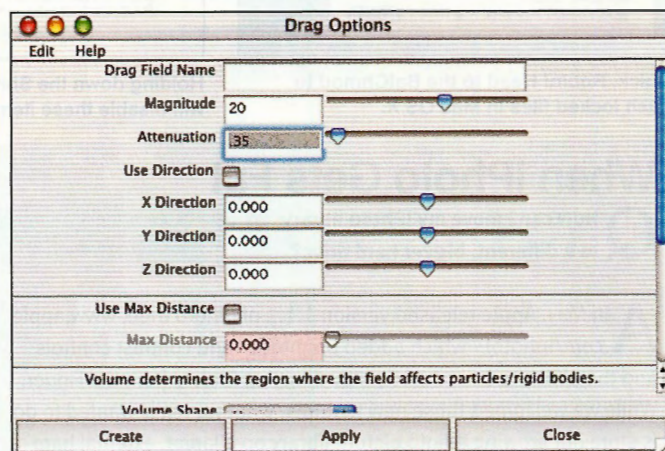


**11 Build Bounce-Back** To make the particles bounce when they hit the ground, select particle1 in the outliner panel and Shift-click the ground plane in the perspective window. From the Particles menu, select Make Collide. To force particles to shoot outward when they hit the ground, click particle1 in the outliner panel. From the Fields menu, mouse over Volume Axis and click the box to its right. In the Volume Axis Options dialog box, select Cylinder from the Volume Shape drop-down menu; set Volume Offset X to 15, Volume Offset Y to 5, and Volume Offset Z to 15; set DirectionY to 4; set Magnitude to 300, set Away From Axis to 1; and click Create.

Create the billowing smoke cloud at the base of the blast by forcing particles to move outward.



**12 Employ Physics for Realism** To make the emissions billow more realistically, slow their motion toward the end of the trajectory. To do this, click particle1 in the outliner panel. From the Fields menu, click the box to the right of Drag. In the Drag Options dialog box, set Magnitude to 20, set Attenuation to .35, and click Create. Then press play and have a blast. When you're ready to render your animation into a final movie, select Rendering from the menu sets drop-down menu. From the Render menu, select (Save) Batch Render. Note: Unless you copied every attribute in our *RocketAnimation.mp* file to your own, your animation may vary significantly.



For more realism, slow the motion of the residual emissions blast by applying a drag attribute.

Sean Wagstaff is a freelance 3D artist, writer, and digital handyman with lots of hungry mouths to feed. Reach him via [www.wagstaffs.org](http://www.wagstaffs.org).



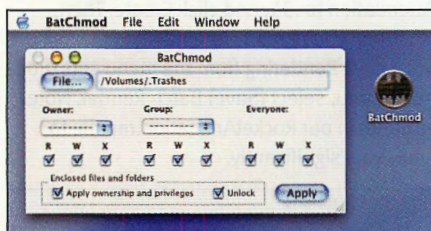


Submit technical questions or helpful tips directly via email ([askus@macaddict.com](mailto:askus@macaddict.com)) or c/o **MacAddict**, 150 North Hill Dr., Brisbane, CA 94005.



**Q** How do I unlock files to empty the Trash in Mac OS X?

**A** Emptying the Trash in OS X, as in real life, can be a headache—particularly when you're dealing with locked files. Unlike Mac OS 9 and earlier, Mac OS X won't let you simply hold down the Option key to eliminate locked files. This can cause problems if you are trying to delete lots of files and folders, which may contain locked files buried within the directory structure. To fix this problem, try a great free utility written by Renaud Boisjoly called BatChmod (<http://homepage.mac.com/arbysoft>), which can unlock lots of files at once and even empty the Trash for you. This is a must-have utility for any Mac OS X power user's toolbox.



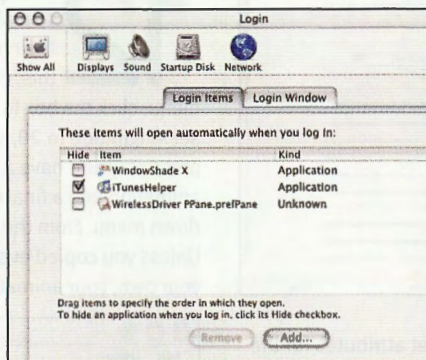
**Quick, Robin! Head to the BatChmod to trash locked files in Mac OS X.**



**Q** What does holding down the Shift Key at startup do in Mac OS X?



**A** The Shift key in Mac OS X isn't as all-powerful as it is in Mac OS 9. In Mac OS 9, holding down the Shift Key at startup turns off your Mac's system extensions. In Mac OS X, it prevents startup items from launching automatically. These are the items you've chosen in the Login System Preference (it's the same as putting items into the Startup Items folder in Mac OS 9). Holding down the Shift key at startup also closes any open Finder windows. Since Mac OS X is a multiuser system, you'll have to hold down the Shift key longer than you would in Mac OS 9. If you set your Mac to log in automatically as a certain user, continue to hold down the Shift key until the desktop appears. If you choose a user or type a user name, hold down the Shift key after clicking the log-in button.



**Holding down the Shift key during startup will disable these items.**



**Q** Is it possible to jump to a specific part of a song on my iPod?



**A** The quickest way to scroll through a song is to hold down the iPod's forward and reverse buttons. To jump to a point in a song, however, press the center button once (and then let go). This changes the volume bar to a little diamond. Now, spinning the jog dial takes you to different parts of the song.



**Q** How can I get an Orinoco WaveLAN wireless PC Card to work in Mac OS X?



**A** Orinoco has no plans to release Mac OS X software drivers; however, you can download free open-source OS X drivers for your WaveLAN PC Card from <http://wirelessdriver.sourceforge.net>. A few items, like AppleTalk, don't work well with this software, but it's under active development.



**Revive your WaveLAN card in Mac OS X.**

Buz Zoller's six years of experience providing technical support for Apple, Power Computing, and a large school district have transformed him into the sublime Mac being he is today.

## When iPhoto Gets Fat



**Q** How can I move my iPhoto library to a different, bigger hard drive?

**A** In May, Apple released version 1.1.1 of iPhoto (free, [www.apple.com/iphoto](http://www.apple.com/iphoto))—which added brightness and contrast controls and the ability to create albums by dragging folders from the Finder. While we welcomed these new features, what we really wanted to do is store our growing iPhoto picture library on a larger, external hard drive. While iPhoto 1.1.1 doesn't officially let you do this, Apple's behind-the-scenes changes have made working around this issue much easier than it was in version 1.0, when you had to use Symbolic Links. Here's how to do it:

1. Locate your iPhoto Library folder in your ~/Pictures folder. This is where all you store all your iPhoto pictures and albums.
2. Move or copy this folder to the new location where you want to store your pictures.
3. Press and hold down the Command and Option keys, and drag the moved iPhoto Library folder back into your ~/Pictures folder to create an alias of it. Now the original iPhoto Library folder and the new iPhoto Library alias folder are in the same location.
4. Next, trash your original iPhoto Library folder.
5. Delete the word *alias* from the name of the alias so it just reads *iPhoto Library*. That way, iPhoto won't create a new Library folder each time you launch it.
6. Now iPhoto will follow that alias to the new location.



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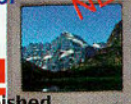
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600MHz	12.1" TFT	20GB	128MB	Combo CD-RW/DVD	1/2	256K L2	10/100	#147863	\$1494 <sup>98</sup>
600MHz	14.1" TFT	20GB	256MB	Combo CD-RW/DVD	1/2	256K L2	10/100	#147855	\$1794 <sup>98</sup>

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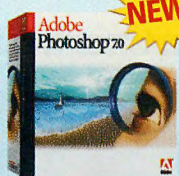
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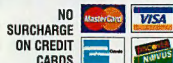
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<b>800MHz</b>	15.2"	40GB	512MB	Combo CD-RW/DVD	1/2	ATI Mobility Radeon 7500	Gigabit	56K	#147877	<b>\$3194<sup>98</sup></b>

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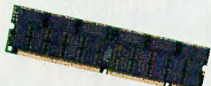
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128MB ...	\$25.95	\$26.95

Mac 5V DIMMs required for 54/55/6360/65/72/73/75/76/85/86/95/9600s, PowerComputing /PowerWave/PowerTower/PowerCenter, SuperMac J700/S900/C500/C600. \*\*PowerMac 7200 is not compatible with EDO DIMMs. \*PowerMac 5500/6500/C500/C600 Require EDO DIMMs. \*128MB DIMMs are not compatible with 54/55/6360/64/6500/C500/C600 Model machines.

168PIN 3.3v Mac DIMMs EDO 60ns



64MB ... \$27.99

Mac 3.3V EDO DIMMs are required for PowerMac 4400, PowerMac 7220/200 (international version of 4400), Motorola StarMac 3000/4000, Motorola based clones.

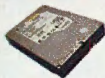
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For most older 040, PPC Pre-PCI Models



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\*For PowerPC 61XX/71XX/81XX, 9150 models only!

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Note: Above ATA Drives are fully compatible with all versions of vanilla ATA/IDE, ATA/33, ATA/66, ATA/100, ATA/133, EIDE, UDMA, Etc. Drives may be used with any Mac that has built in IDE/ATA or an added ATA/IDE controller (such as by VST, Acard, Sonnet).

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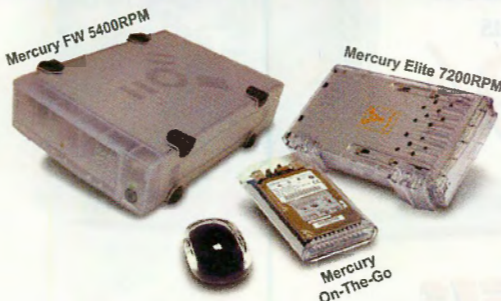
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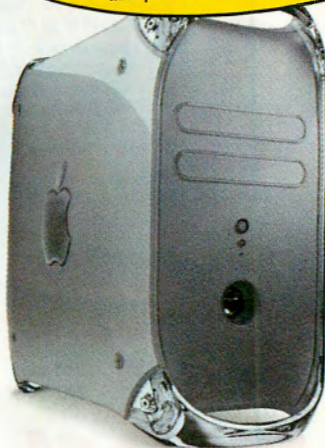
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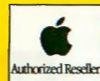
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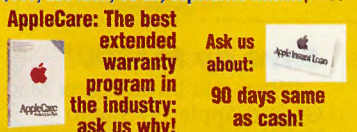
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## Corporate Pro DV \$15,294

Apple PowerMac G4 933, 1280 MB RAM, 60 GB boot drive, 2 internal 80 GB media drives, internal DVD-R/CD-RW, Canon GL-1 DV Camera w/Kata case, Apple 17" flat panel display, Sony NTSC monitor, JVC dual DV/SVHS deck, Contour Designs Shuttle Pro, Light Package, Sound Package, Apple Final Cut Pro, DVD Studio Pro, Commotion Pro, Sonicfire Pro, Boris Graffiti, Toast Titanium, Norton Systemworks, flat panel speakers, tripod, 2 extra camera batteries, 5 DVD-R disks, 10 DV tapes, 50 CD-R disks, all software pre-installed, free technical support.



## Mobile Pro DV \$15,833

Apple Powerbook G4 800 MHz, 1GIG RAM, 40 GB hard drive, internal DVD-ROM/CD-RW, external 60 GB portable firewire hard drive, Apple pro keyboard & mouse, Lowepro Powerbook case, Canon XL1S DV Camera w/Kata case, Bogen tripod, Sony miniDV deck w/LCD display, Light Package, Sound Package, Apple Final Cut Pro, Boris Graffiti, Commotion Pro, Sonicfire Pro, Toast Titanium, Norton Systemworks, Bogen tripod, 2 extra camera batteries, 10 DV tapes, 50 CD-R disks, all software pre-installed, free tech support.



## Home Director DV \$6,825

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## PowerDV Pro Light Pack \$1,065

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## PowerDV Sound Pack \$1,188

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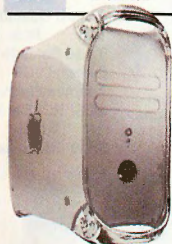


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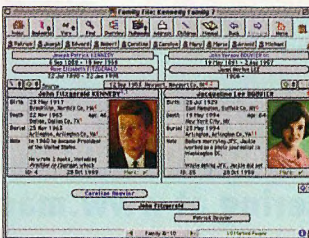
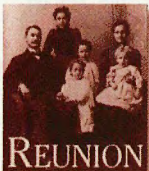
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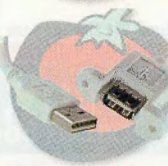
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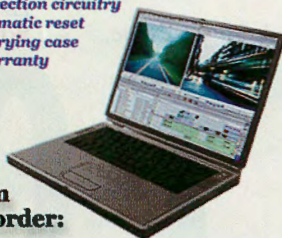
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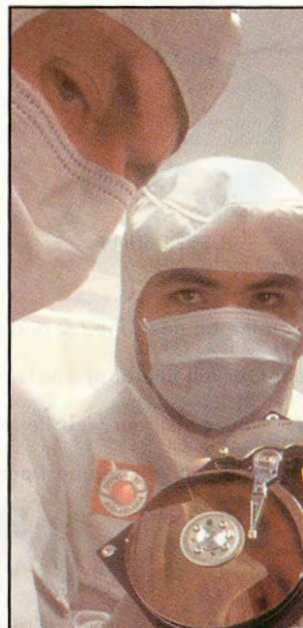


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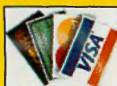
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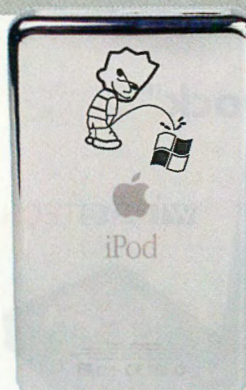
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